

# THE HINDU TEMPLE

BY

STELLA KRAMRISCH
*Professor of Indian Art*
*University of Calcutta*

VOL I

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BY
RAYMOND BURNIER

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स्थापकान् स्थपतींश्चापि पूजयाम स्वशक्तित ।

WE EXPRESS OUR GRATITUDE TO
SRIYUKTA SYAMAPRASAD MUKHOPADHYAYA

Our thanks are due to R M Hawes
for his help in revising the English

# PREFACE

An attempt has here been made to set up the Hindu temple conceptually, from the foundation to its finial Its structure is rooted in Vedic tradition, and primeval modes of building have contributed their shapes The principles are given in the sacred books of India and the structural rules in the treatises on architecture They are carried out in the shrines which still stand throughout the country and which were built in many varieties and styles over a millennium and a half from the fifth century A D

The purpose of the Hindu temple is shown by its form It is the concrete symbol of Reintegration and coheres with the rhythm of the thought imaged in its carvings and laid out in its proportions Their perfection is a celebration of all the rites enacted during the building of the temple from the ground to its pinnacle Nothing that is seen on the temple is left unsaid in the verbal tradition nor is any of the detail arbitrary or superfluous Each has a definite place and is part of the whole

The Hindu temple is the sum total of architectural rites performed on the basis of its myth The myth covers the ground and is the plan on which the structure is raised

Diacritical signs are used on Sanskrit words

For typographical reasons they are partly omitted on small headings

Pronunciation

a, at the end of words is semi mute

c, like ch in chapel

e, is always long

h, following a consonant is to be pronounced

ñ, palatal, ṇ, lingual

o is always long

ṛ, like ri

ś (palatal) and ṣ (lingual), like sh

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# I

# THE SITE

वनोपान्तनदीशैलनिर्झरोपान्तभूमिषु ।
रमन्ते देवता नित्यं पुरेषूद्यानवत्सु च ॥

"The gods always play where groves are near, rivers, mountains and springs, and in towns with pleasure gardens"

'Bṛhat Saṃhitā', LV 8
'Bhaviṣya Purāṇa', I CXXX 15

अदाद्यमोऽवसानं पृथिव्या इति ।
यमो ह वा अस्या अवसानस्येष्टे स एवास्मा अस्यामवसानं ददाति ॥

"Yama (Death) has given (us) the residence on earth Yama indeed rules over the earth and it is he who grants the sacrificer a residence on this earth"

'Śatapatha Brāhmaṇa', VII I 1 3

# I

# THE SITE

## TĪRTHA AND TEMPLE

Life as a pilgrimage from birth to death has many stations In India death is but another station and in itself does not bring final release (moksa) Final release from all conditions of existence, from all limitations, is gained through Knowledge (Brahmavidyā), and Knowledge, the realisation of Supreme *identity, is the means and the end itself it gives and is release* Some attain it while alive (jīvan-mukti), others at death To the great mass of people, who are without the faculties and training to make them fit for the realisation of the Supreme Principle by Knowledge, other roads lie open which also lead to the Centre Pilgrimage is one, it brings joy (bhukti) and release (moksa) to those who have achieved control of their minds and of the actions of their hands and feet, who have sapience (vidyā), and who have practised austerities and have a good name [1]

The places of pilgrimage are distributed through the entire country and are called Tīrtha and Ksetra The number of these sacred sites is large, the 'Mahābhārata' speaks of hundreds of places of pilgrimage [2]

Tīrtha is the name of a place of pilgrimage on the bank of a river, the sea-shore or a lake The meaning of the word is a ford, a passage Water, the purifying, fertilizing element being present, its current which is the river of life can be forded in inner realisation and the pilgrim can cross over to the other shore The place of pilgrimage is the end of the journey to the Centre, but it is not itself the goal and only the means for crossing over to the Centre For this reason the number of Tīrthas and Ksetras is indefinitely large [3] For this very reason too no journey need be undertaken at all

[1] 'Agnipurāna', ch CIX 1b-2a

[2] 'Mahābhārata', Ādiparva, II 2, Vanaparva, Tīrthayātrāparva

[3] Ksetra is sacred ground, a field of active power, a place where 'moksa', final release, can be obtained The 'Garuda Purāna', I XVI 14, enumerates seven cities as givers of 'moksa' They are Ayodhyā, Mathurā, Māyā, Kāsī, Kāñcī, Avantikā, Dvāravatī The sacred geography of India recognises the whole country as a field of more than human activity It is carried by the rivers, from the celestial region where they have their prototype and origin, down to the earth Śaiva tradition knows the special potency of certain places (pītha) in India resulting from the fall to earth of the dismembered body of the dead Satī, a form which

There is one Tirtha where one should always bathe and this is the Tīrtha of the mind (mānasatīrtha) It is deep, clear and pure, its water is truth (satya) and metaphysical knowledge (Brahmajñāna) Those who take this bath see the Principles, the true nature of things (tattvadarśin) [4]

The Tīrthas and Ksetras on Indian soil are potent sites where a presence is felt to dwell Its support is in the place itself Whatever makes the site conspicuous or memorable is reinforced in its effect by the attention of the people directed towards and concentrated on that spot In such places "the gods are seen at play"

"The gods always play where lakes are, where the sun's rays are warded off by umbrellas of lotus leaf clusters, and where clear waterpaths are made by swans whose breasts toss the white lotuses hither and thither, where swans, ducks, curleys and paddy-birds are heard and animals rest nearby in the shade of Nicula trees on the river banks

The gods always play where rivers have for their bracelets the sound of the flight of curleys and the voice of swans for their speech, water as their garment, carps for their zone, the flowering trees on their banks as earrings, the confluence of rivers as their hips, raised sand banks as breasts and the plumage of swans their mantle

The gods always play where groves are near, rivers, mountains and springs, and in towns with pleasure gardens" ('Bṛhat Samhitā', LV 4-8, 'Bhavisya Purāna', I CXXX, 11-15) "It is such places that the gods love and always dwell in" ('Bṛhat Samhitā', 8, Comm , quoting Kāśyapa)

Mahāmāyā had assumed Where its parts came to lie, the energy associated with the special part or limb was added to the earth, strengthening that particular spot and leading to an attainment of the corresponding faculty by man Distributed in 51 centres the power of Mahāsakti is integrated in the soil of India (Swāmī Karpātrījī has explained the 'Secret of the Sacred Places' in an article on 'Pīṭha Rahasya', in 'Siddhānt', No 35, Benares, 1941)

The realisation of the descent of more than human power to earth makes India a sacred land Near the water and at other definite sites its presence is more strongly felt Some of these consequently are laid out in a particular way, such as Kurukṣetra where the 4 corners of the potent field are marked each by one place of pilgrimage and the middle is occupied by the place of central sanctity ('Mahābhārata', Vanaparva, ch LXXXI 207 , Cunningham, 'Archaeological Survey Report', Vol II pp 214 217), or Pātaliputra, in the middle of 4 towns (P Mus, 'Barabudur', 'Bulletin de l'Ecole Française d'Extrême Orient', Vol XXXII, p 669) In view of the 'descent' of the sacred power to the earth, it is ontologically its own projection from the beyond, along the vertical axis This symbolism belongs not only to the sacred geography but more ostensibly even to the sacred architecture of India (Pt V)

[4] 'Mahābhārata', Anusāsanaparva, CLXX 2 3 , 12 13

While 108 chief places on earth, etc , and in the mind, are spoken of in the 'Matsyapurāna' (XIII 26-54), chapter CII 3 5, enjoins that three and a half times ten millions of Tīrthas in heaven, earth and the atmosphere should be conceived as in the water where one takes the ritual bath by realising within it, in a square of four cubits, the sacred Ganges, the most holy of all Tīrthas (cf ch CVI 53)

The 'Mahānirvānatantra', X 105, knows by still closer identification, that the "three and a half times ten millions of Tīrthas and all the gods, Brahmā, etc , reside in the body of the Kaula and all the shrines and holy places which are in this world they all abide in the body of the Kulasannyāsin (the highest class of ascetic)" , ib , XIV 174

Where the gods are seen at play, in all these places, it is but 'the one God engaged in eternal play' [5] Play is the modality in which the Supreme Spirit displays his presence in the world It is in its effortless movement and in the perfection of corresponding forms There is no other reason for the appearance of the world than that which is in Brahman itself It shows itself most convincingly at certain places They have beauty, for it is there that the celestial intelligence, —the gods, intermediate between the Lord and man,—has its sport and display [6]

The gods are installed not only in Tīrthas, on the banks of rivers, lakes and on the seashore, at the confluence of rivers and estuaries, but also on hill-tops and mountain-slopes, in forests, groves and gardens, near the abodes of the blest or hermitages, in villages, towns and cities or in any other lovely place ('Tantra-Samuccaya', I 1 28, see Frontispiece) [7] Ritually, the site of the temple is a Tīrtha wherever it is situated The 'Visnudharmottara' (Part III, chapter XCIII, 25-31), an early compendium, speaks of the installation of consecrated images (arcā) "Installations should be made in forts, in auspicious cities, at the head of shop-lined streets , in villages or hamlets of cowherds where there are no shops, the installations should be made outside in gardens, Installations should be made at riversides, in forests, gardens, at the sides of ponds, on hill-tops, in beautiful valleys and particularly in caves At these places, the denizens of heaven are present In places without tanks, gods are not present A temple therefore should be built where there is a pond on the left, or in front, not otherwise If a temple is built on an island, the water on all sides is auspicious " The presence of water is essential, but if it is neither available by nature nor by artifice it is present symbolically at the

[5] "Eko devo nityalīlānurakta", 'Rādhā Upanisad', IV 3

[6] "Na prayojanavattvāt, lokavat tu līlākaivalyam" 'Brahma Sūtra', II 1 32-33 "Brahmā's creative activity is not undertaken by way of any need on his part, but simply by way of sport, in the common sense of the word" A K Coomaraswamy, in 'Līlā', 'Journal of the American Oriental Society', 1941, pp 98-100

[7] More than a millennium of textual continuity and identity of metaphysical foundation accompanies the practice of building temples in all their variety in the different parts of India at the various phases of its history The elaborated later temples and explicit texts are an exposition of the meaning which is present in the form, from its beginning

The authorities quoted are referred to in the present context not in their chronological sequence, but irrespective of it, in the meaning which they have in common Their historical and geographical relation to the monuments however are considered in a later Part (VII) where the terminology of Indian temple architecture, their types and 'styles' are explained

The text-books of Vāstu-Śāstra, the science of architecture, are records of oral traditions which go back into an undefined past The 'Brhat-Samhitā', for instance, compiled by Varāhamihira in the middle of the sixth century A D is based on the authority of master architects whose names are Maya, Viśvakarman (ch LV, 30), Garga and Manu The 'Brhat Samhitā' is but a brief account of their treatises (ib śl 31) It is the earliest datable source on Vāstu-Śāstra The 'Viṣnudharmottara' is of the seventh century approximately The 'Tantrasamuccaya' of Nārāyanan Nambūdiri of Kerala, Malabar, belongs to the fifteenth century

The Frontispiece gives a general view of Amarakantaka in Rewa State, central India, this is the Omkāra Ksetra The great sage who practises austerities there becomes a 'jīvanmukta' The 'Matsyapurāna', CLXXXVI and CLXXXVIII, praises this Tīrtha Its present temples date from the eleventh century to recent times

consecration of temple or image Thus it is described how during the rite of 'adhivāsana' by which the divinity is made to assume its abode in an image about to be installed, the image of Visnu is laid to rest on the world serpent Sesa (Ananta), on a ford raised for this purpose in a river, lake or tank Offerings are made to the Lord (Yogesa), to the Sabda-Brahman,—the principle of articulate sound, or the Word,—to the oceans, mountains, Sages (rsi), Fathers (pitr) and Spirits (bhūta) Varuna, the presiding divinity (of the waters) and Siva, the Lord of the sacred Tirtha are worshipped, should neither river, lake nor tank be near, three jars of water are placed in the Brahmasthāna, the centre of the sacred site [8]

Temples are built where Tirthas are, their towering shapes to the last point of their height teem with forms which have the urge and fullness of *Indian nature*, step by step, level by level they lead the eye and mind of the devotee from this world to the worlds above The temples rise from a broad base differently built according to specific types, they have their variations in time and place and their shapes were elaborated in many schools As they are to day in southern India their high superstructures ascend in pyramidal form, while in northern India they fling their curvilinear faces towards a meeting point above the sanctuary [9]

Sometimes the temples form cities of God with many buildings of great extent and complex design, or the temple is but a small chapel only Wherever a Hindu temple stands, whatever age witnessed its growth, and to whatever size, as house, body and substance for God (the Essence) to dwell in, it is built in principle on the same plan, the Vāstupurusamandala

Although this ritual diagram is neither the ground-plan of the temple nor necessarily the plan of the site, it regulates them It may be coterminous with the site of the sacred precinct, or with the extent of the main temple building (prāsāda) only, or it may be drawn on an altar, and of standardised size [10] It is drawn on the ground prior to the building of the temple and on it the temple

[8] 'Vaikhānasāgama', ch XXXI, summary of the respective passage

[9] The South Indian temples are distributed over an area which *in extent is one fifth* only of India

[10] The 'Brhat Samhitā', ch LV 10, prescribes the Vāstumandala of 64 squares for temples Ch LII 42 54, gives the Vāstumandala of 81 squares, also for other buildings, and for towns, villages, etc

The 'Agnipurāna', ch XCIII 42, lays down 5 cubits (hasta, 7½ feet) square as standard size of the Vāstu, if not otherwise specified, its 'best' measure however is equal to that of the building which contains the sanctuary (*grha prāsāda*), the temple *proper* The latter definition is also given in the 'Samarāngaṇasūtradhāra', ch LIX 3, where however the plan to the end of the two diagonals of the Prāsāda or Vimāna, the temple proper, is stated to have 81 squares This is in agreement with 'Īśānaśivagurudevapaddhati', Part III ch XXVII, 50, (translated by St Kramrisch in the 'Journal of the Indian Society of Oriental Art', Vol IX, p 167)

In ch X, 4, 69, 78-80, of the 'Samarāngaṇasūtradhāra', the Vāstu of 64 squares, however, comprises the entire building site of a *[fortified]* town (pura) *or* of a city (nagara) and this seems to apply also to villages (grāma) and hamlets (kheta)

The whole building site, the entire planning of town and temple and of the building of the main sanctuary, the Prāsāda, *or* Vimāna, conform with the Vāstupurusamandala, so that the gods dwell *there in peace*

stands either in fact or symbolically In principle it is always square and is the record of an architectural rite The knowledge of its correct execution forms the first part of the science of architecture ('Samarānganasūtradhāra', ch XLV 2) The square is divided into compartments and the diagonals are drawn The name of the square is Vāstupurusamandala Purusa is the universal Essence, the Principle of all things, the Prime Person whence all originates [11] Vāstu is the site, in it Vastu, bodily existence, abides and from it Vāstu derives its name In bodily existence, Purusa, the Essence, becomes the Form The temple building is the substantial, and the 'plan' (mandala) is the ritual, diagrammatic form of the Purusa Purusa himself has no substance He gives it his impress The substance is of wood, brick or stone in the temple

The form of the temple, all that it is and signifies, stands upon the diagram of the Vāstupurusa It is a 'forecast' of the temple and is drawn on the levelled ground it is the fundament from which the building arises Whatever its actual surroundings, forest glade, seashore, hill or town, the place where the temple is built is occupied by the Vāstupurusa in his diagram, the Vāstupurusa-mandala That it is surrounded by the streets of a town, walls of a fort, ravines or fields, becomes of secondary importance, for its particular topography is but the hinge by which a changeable panorama is linked with the structure of the universe The site is ritually levelled each time a temple is built, the ground from which the temple is to rise is regarded as being throughout on an equal intellectual plane It is at the same time terrestrial and extra-territorial It is the place for the meeting and marriage of heaven and earth,[12] where the whole world is present in terms of measure, and is accessible to man

## SITE AND BUILDER

Man here is the patron or Yajamāna (lit the sacrificer) on whose behalf the temple is built by the architect who is guided by the priest in the principles of his work In the diagram of the Vāstupurusa a communication is established between man (purusa) as the patron of the work and the Purusa, the Essence of all things At the definite time and place where the temple is to be set up, all times and all places congregate in the symbolic diagram of the Vāstupurusa On this ritual drawing rests the super-structure of the temple, which is the manifestation (mūrti) of God [13] The ritual diagram of the Vāstupurusa is drawn wherever the site is

[11] 'Harivamsa', ch I, R Guénon, 'Quelques Remarques sur le Nom d'Adam', 'Études Traditionelles', 1931, pp 726-31

[12] "Once heaven and earth were united Separating, they said Let what is suitable to the sacrifice be common to both" 'Taittirīya Brāhmana', I 1 3 2-3, 'Tāndya Brāhmana', X 6 1-3, etc

Heaven and earth, once joined, subsequently separated The beings, the 5 classes of them, gods, men, and so on, did not keep peace The gods brought about a reconciliation of these worlds Both contracted a marriage according to the rites observed by the gods

[13] 'Īsānasivagurudevapaddhati', Pt III, ch XII 16, JISOA, Vol X, p 225

prepared for this purpose. The preparation is in the readiness and discipline of the mind and heart of the patron and of those who are entrusted with the work because they have the competent skill. The priest has the guidance, the architect, who builds the temple, works in conformity with the knowledge of the priest.

A pilgrimage or visit to a temple is undertaken for the purpose of looking at it (darsana) with the sight of knowledge. Darśana is also the name of the six traditional points of view or methods of cognising Truth.[14] The architect of the temple was not only a master of the 'ocean of the science of architecture'. Balanced himself in body and mind, he had to be versed in the traditional science (śāstra) in its various branches, and as much in the knowledge of rhythms (chandas),[15] mathematics and astronomy as in the conditions of different places, etc. ('Samarānganasūtradhāra', XLIV. 2-4, and 'Vāstuvidyā', I. 12.15). The various arts and sciences had to be known for one and the same purpose, so that he could apply them in his work which was to be an image and reconstitution of the universe.

In the 'Samarānganasūtradhāra', a treatise on architecture, the author, King Bhoja of Dhārā, who ruled over Mālava in the first part of the eleventh century, says: "He, who begins to work as an architect (sthapati) without knowing the science of architecture (vāstuśāstra) and proud with false knowledge must be put to death by the king as one who ruins the kingdom (rājahimsaka), dead before his time, his ghost will wander on this wide earth. He, who though well versed in the traditional science is not skilled in the work will faint at the time of *action like a timid man on the battle-field*. He, who is expert only in his workmanship, but unable to understand the meaning of the traditional science, will like a blind man be misled by anyone" (S.S. XLIV. 6-10). Even so, he who knows the traditional science and its meaning and masters the craft, is not as yet the perfect architect. For immediate intuition, a readiness (pratyutpannatā) of judgment (prajñā) in contingencies, and the ability to fuse them into the requirements of the whole, are the distinctions of a true Sthapati.[16] It is then, that the builder himself, once his work is completed, is struck with wonder and exclaims: "Oh, how was it that I built it!"[17]

[14] *They are*: Nyāya, Vaiseşika, Sāṅkhya, Yoga, Mīmāṁsā and Vedānta. While Vedānta cannot be realised without Yoga, Darsana, a direct seeing of the meaning which the temple demonstrates, presupposes Yoga.

[15] This refers to the rhythmical disposition of the ground plan, for example (Pt. VII).

[16] ib., verse 14, paraphrased.

[17] This is expressed in a copper-plate inscription from Baroda of a Rāṣṭrakūṭa king of Gujerāt, and is said to refer to the Kailāsanātha temple at Elura (Elāpura), a kirtana in which the king "caused to be made in the hills at Elāpura, a wonderful building on seeing which the best of immortals who move in celestial chariots, struck with wonder think much constantly, saying: This temple of Śiva is self-existent; in a thing made by art such beauty is not seen. The Śilpin (architect) of this temple in consequence of the failure of his energy as regards (the construction of) another such work, was himself suddenly struck with wonder saying: Oh, how was it that I built it!" ('Epigraphia Indica', Vol. I, p. 150; R. G. Bhandarkar, 'The Rāṣṭrakūṭa King Kṛṣnarāja I', 'Indian Antiquary', Vol. XII, p. 228 f.)

The architect, Sthapati,[18] is the foremost of the craftsmen (silpin), of whom there are four classes, Sthapathi, Sūtragrāhin, Taksaka and Vardhakin, the designing architect, surveyor, sculptor and builder-plasterer-painter These craftsmen carry out the instructions of the Sthāpaka, the architect-priest, who has the qualification of an Ācārya The relation of priest and executive craftsman corresponds to the rule laid down for Christian art in the second Council of Nicaea (787 A D ) "His art alone belongs to the painter, its organisation and arrangement belong to the clergy " It is defined in the 'Śilparatna' (I 29-42) in which it is said of the Ācārya or Guru, who is the Sthāpaka

"He who wishes to build villages, etc , or royal palaces, etc , tanks, etc , or temples, should select a Guru and Śilpin for this purpose Let the Guru be a Brāhmana of high born family, who has performed all the sixteen purificatory rites, who knows the essence of the sacred texts, the Vedas and Āgamas, and who observes the rules of conduct according to his caste (varna) and stage of life (āsrama), who has received initiation (dīksā), is competent, exerts himself in his work (tapasvin) and is a believer (āstika) in the sacred tradition

[18] Sthapati, in 'Āpastamba Srauta Sūtra', XXII 7 6, designates the Yajamāna, the sacrificer who is to be consecrated as priest As builder of the Hindu temple, the Sthapati, by his special knowledge guided by the Sthāpaka is competent to act for his patron, the Yajamāna ('Īśānasivagurudevapaddhati', Pt III, ch XXVI , JISOA, Vol IX, p 152 f) The patron is also designated as Kāraka, who makes the architect, the Kartr, do the work ('Samarāngaṇasūtradhāra', LXI 303)

The Sthapati who is called Visvakarmā, in 'Mayamata', V 13 f , is described as a disciple (anusisya) of the Sthāpaka, ib XII 35 f This essential relation is ignored by P K Acharya, in his 'Dictionary of Hindu Architecture', s v

The Sūtragrāhis or Sūtradhāras, who hold the cord (sūtra, sulva, rajju, etc ) [originally the bamboo rod (venu)] in the construction of the Vedic altar, have been, it appears, described by Democritos (440 B C ) as Harpedonaptai

The descent and fall of the Hindu architect and the craftsmen, from their celestial origin, and from Vedic tradition is told in the 'Brahmavaivarta Purāna', I X 20-23f

Visvakarman begot nine illegitimate sons on a Sūdra woman They are named Mālākāra (garland maker), Karmakāra (blacksmith), Śankhakāra (conch shell carver), Kuvindaka (weaver), Kumbhakāra (potter), Kāmsyakāra (metal worker), Sūtradhāra (architect, carpenter), Citrakāra (painter), Svarnakāra (goldsmith) All of them are expert in the arts (kalā) but the last three being cursed by a Brāhmana became unholy and were deemed incompetent by the Sāstras to offer sacrifices

Visvakarman cursed by Ghrtācī (an Apsarā) descended to earth and was born by a Brāhmana woman Visvakarman when he came to the world as a Brāhmana was regarded as an unparalleled architect in view of the very grand, extraordinary and royal mansions which he constructed He also instructed ordinary people on matters relating to architecture in various ways

Svarnakāra became outcasted and unholy on account of the curse pronounced against him by a *Brāhmana whose gold he had stolen* Sūtradhāra *neglected to carry out the orders* of a Brāhmana to collect fuel for sacrificial purposes, and being cursed by him, was likewise degraded Citrakāra transgressed the orders of a Brāhmana in respect of a picture the composition of which was defective and not according to the rules and underwent the same fate

It was then that the original function of art (silpa) was lost The destination of works of art is defined in the 'Aitareya Brāhmana' VI, 5 27 "Śilpāni, works of art of men, are an imitation of divine forms, by employing their rhythms a metrical reconstitution is effected of the limited human personality" (trans by Coomaraswamy , in 'La Nature du Folklore', L T 1937, pp 206 18)

First a Sthapati is to be selected—one well versed in the Śilpa-śāstras, similarly, a Sthāpaka also, knowing the Śilpa-śāstras and possessing all the qualifications of an Ācārya, being selected by the patron, should perform the architectural rites (vāstu-karma) The temple (vimāna) or any other (construction), begun by these two should be continued by them only and by no other In case they be not available, the work should be done by either their sons or disciples who are competent in the work" Then follows the description of the four classes of craftsmen (śilpin)

"The Sthapati should be fit to direct (sthāpana) the construction and should be well-versed in all Śāstras, the traditional sciences, perfect in body, righteous, kind, free from malice and jealousy, a Tāntrik and well-born, he should know mathematics and the Purānas, the ancient compendia of myths, etc, painting, and all the countries, he should be joyous, truth speaking, with senses under control, concentrated in mind, free from greed, carelessness, disease and the seven vices ('Manu-Samhitā' VII 47-48), famous, having firm friends and having crossed the ocean of the science of Vāstu

The disciple or son of the Sthapati is the Sūtragrāhin He should always carry out the orders of the Sthapati, should be expert in all sorts of work, and should know the proportionate measurement by the cord (sūtra) and rod (danda) as applied to the whole building and its parts (see Pt VII), the horizontal and vertical proportions (māna, unmāna)

The Taksaka is so called because he cuts off and carves (taks) the large pieces and the subtle detail He is also expert in working in clay He should be qualified, able, and capable to perform all sorts of work on his own initiative, in the right way, devoted to the Guru, ever cheerful, and obedient to the Sthapati

The Vardhakin is so called because he increases (vrdh) [by placing together what the Taksaka has carved and by adding to the finished work, the painting] and he always follows the Sūtragrāhin

Without these four nothing can be undertaken Therefore all these four, the Sthapati and the others, should always be honoured"

Vāstu-sāstra, the traditional science of architecture, is subordinated to, and forms an auxiliary part of the Veda, the primordial Knowledge, in it intellectual intuition is laid down as sacred word

Vāstu-sāstra belongs to, and is, applied astrology Varāhamihira, in his 'Brhat-Samhitā' introduces the chapter on architecture (LII) saying "Vāstu-jñāna (the knowledge of Vāstu), architecture, will be explained by me for the pleasure of the astronomers and astrologers, as it has been transmitted from Brahmā to our days through an unbroken series of sages" Building is begun under favourable stars They are consulted when the ground is taken possession of and when the rite of depositing the Germ of the temple is performed The regents of the planets and the stars have their allocation in the diagram of the temple and their images are carved on its walls By them are regulated the measurement of the whole building and its parts, the life of the donor (yajamāna), and the age of the temple too The temple is built in the likeness of the universe and is its reduced image The architect of this world image, the temple, is looked upon as descended from, and in his sphere alike to, Viśvakarman, who made all

that exists in the universe [19] The architect in charge of the building is therefore generally called Sthapati The name means "master of what stands or abides" The science of architecture, called as a rule, Vāstu-sāstra, is also named Sthāpatya-sastra-veda It is the knowledge of ordered and planned extension (vāstu) and is put into practice by the master who makes existing things (vastu) abide in order Sthāpatya-śastra-veda is enumerated as an Upaveda, a lesser, applied knowledge subordinated to the Atharvaveda [20] Vāstu-sāstra in its fullest exposition belongs to Tantra which is the applied knowledge of the Atharva Veda As a ritual, architecture is moreover doubly linked with the primordial Knowledge, the Veda, and is included in two of the six Vedāngas These are appendices which are auxiliary to the Veda The fifth Vedānga, astronomy-astrology, Jyotisa, and the sixth Vedānga, Kalpa, in which are laid down the rules of the sacrificial acts, the ritual, are both, in parts, essential constituents of the science of Indian architecture [21] The Śulva-sūtras contained in the Kalpa-sūtras, represent the rules and give proportionate measurement for laying out and piling up the Vedic altar [22] On them, basically rests the building of the Hindu temple

The Vāstupurusamandala, the diagram of the temple, is a Yantra ('Vāstu-vidhāna' of Nārada, Ms 1602, Adyar Library, VIII 26) [23] A Yantra is a geometrical contrivance by which any aspect of the Supreme Principle may be bound (yantr, to bind, from the root 'yam') to any spot for the purpose of

[19] With regard to the making of the universe, Visvakarman is the working, Brahmā the thinking aspect of the Supreme Principle

[20] The other Upavedas are Āyurveda (medicine), attached to the Rg Veda (acc to Susruta, I 3, to the Atharva Veda), Dhanur Veda (military science) attached to the Yajur Veda, and Gāndharva Veda (music) attached to the Sāma Veda, *cf* Apte, Dictionary, s v

Sthāpatya Veda, the science of architecture, Āyurveda, the science of longevity, medicine, Dhanurveda, military science, and Jyotiṣa, the science of the luminaries,—astronomy and astrology,—are enumerated by the side of one another, in the 'Samarāṅganasūtradhāra', X 77, also 'Brhadsilpasāstra', I 10

Tantra, as a rule, is enumerated as Upaveda attached to the Atharva Veda Tantra includes Vāstu-sāstra

According to the 'Śukranīti-sāra', IV 3 27-30, Śilpa-sāstra is included in the 32 Vidyās Śilpa-sāstra is defined, 58, as the science which treats of palaces, images, parks, houses, etc

[21] The six Vedāngas are Śikṣā, recitation (articulation and pronunciation), Chandas, metrical science or the science of rhythms, Vyākarana, grammar, Kalpa, ritual, Nirukta, hermeneutics, etymology, Jyotiṣa, astronomy-astrology ('Śukranīti-sāra', IV 3 28-29)

[22] The main subjects included in the general education of a Hindu were Lipi or Lekhā (the alphabet, reading and writing), Rūpa (drawing and geometry) and Gananā (arithmetic) These subjects were taught from the age of 5 till the age of 12, and in their higher stages up to the age of twenty-five The Hathigumpha inscription, 163 B C says that King Khāravela spent 9 years, from the age of 16 onwards in the study of Lekhā, Rūpa, Gananā

A knowledge of form (rūpa), number and proportion was an indispensable equipment, mathematics and architecture had their root in the Vedic altar The indissoluble connection of number and form remained a consciously employed knowledge throughout In the middle of the ninth century A D the mathematician Mahāvīra, in his 'Ganitasāra-samgraha', I 9-19, speaks of the use of the science of number (ganita) in architecture and in all that constitutes the peculiar value of the arts (B B Datta and A N Singh, 'History of Hindu Mathematics', Pt I, p 5)

[23] The MS is in Grantha script, Chapters VIII and X are published in the Appendix, in Devanāgarī

worship It is an artifice in which the ground (bhūmi) is converted into the extent of the manifested universe The nameless, formless entity which is bound in this case to the spot within the square mandala is known henceforth as Vāstu-purusa The components of the artifice are the ground on which the mandala is drawn, the form of the mandala, and its name together with the names comprised in its form

## THE STABILITY OF THE SITE

The temple must be built according to definite rules, and it must be firm (drdha, 'Īsānasivagurudevapaddhati', III ch XXVII 82, 'Vaikhānasāgama', ch VII) The latter injunction seems too obvious to have been made But it does not primarily refer to a substitution of flimsy materials, such as mud, sand, wattle walls and bamboo posts by those of greater permanence, nor to the avoidance of careless construction in brick or stone nor to the desirability of such additional wall strength which would withstand earthquakes With particular emphasis the earth itself is evoked as firm (drdhā) in the Rgveda (X 121 5, X 173 4) and firmly established (pratisthā, 'Śatapatha Brāhmana', VI 1 1 15), and Earth, the goddess, is invoked to stand firm for our well-being ('Vājasaneyi-Samhitā' XI 69, 'Taittirīya Samhitā', IV 1 9 2, Ś B VI 6 2 6) When a house is about to be built, an oblation is poured into the pit to the "steady one", Vāstospati ('Āsvalāyana Grhya Sūtra' II 8 15, 'Pāraskara Grhya Sūtra' III 4 3) A fear is allayed by these epithets, oblations and invocations It is the fear of uncertainty, of the changeable and transitory By being 'firm' the earth becomes secure and a reliable support For 'before she was fixed, mother earth' is spoken of as 'the ever wandering' (AV V 2 6) The rule of order under which buildings can be set up and in which men and gods are at home, is not from the beginning There was unrest and instability Yama, the god of Death, the first of mortals who preceded men on the path to heaven (RV X 14 1) assigns a station to everything that is movable Yama, the Order of things in the cosmos and Righteousness in men, who is the Dharmarāja 'King Law', establishes in this manifested world the immutability of the Supreme Principle "Yama indeed rules over the earth" (Ś B VII 1 1 3) As it was in the beginning, so is it repeated with each building, Yama gives the residence when man builds the small world of his own, his house, or a temple in the likeness of the world, which is God's residence

With regard to the builder, such a settlement too takes place in the intellect itself at the moment when its work is being given concrete form The substance is its support and form is the nature of its activity The form of the concrete work is the final seal of the process which leads to it, it bears the impress of Yama [24]

[24] 'Śatapatha Brāhmana', XI 2 3 5 These indeed are the two great manifestations (vaksye) of the Brahman (the Supreme Principle) One of these two is the greater, namely, Form (rūpa) for whatever is Name (nāma), is indeed Form

King Bhoja, in the 'Samarāṅgaṇasūtradhāra' (VI 5-27, VII 7-34) recounts the afflictions of men when the wishing-trees (kalpadruma) which in the Kṛta Yuga had been their home and sustenance, and when the gods too withdrew to heaven [25] It was, then, that King Pṛthu, the first of men who was installed as a king, attacked Pṛthivī, the earth, with his bow in order to level her ('Samarāṅgaṇasūtradhāra', I 6-24) for she was full of mountains, obstacles to communications and order which he had set himself to establish But she ran away in fear, changing her shape into that of a cow and took refuge with Brahmā, the creator, whom also King Pṛthu then approached Brahmā mediates between them, makes King Pṛthu the protector of Pṛthivī, the earth, and makes her yield to him the crops and the sites for building towns of men and gods

King Pṛthu does his work at a definite stage in the 'history' of the world his prototype is Yama, the Dharmarāja, 'King Law and Order' King Pṛthu who has made the earth yield, and she, the wide, the 'broad one', Pṛthivī (Ś B VII 4 2 6), are thence connected in fact and name Her fugitive, errant state has found rest [26] The earth will no more run away She exists protected by law and order This contract is sealed when her plains are ploughed and her ground is levelled for buildings It is then that the earth is a place of abode (āyatana) for all gods (Ś B XIV 3 2 4 ) and the building ground (bhūmi)[27] the share of the gods ('Śāṅkhāyana Gṛhya Sūtra', III 3 2)

Full of life is the earth it lurks in her and hovers above her The 'genii loci' are many [28] It is necessary that they should depart when a particular spot on the surface of the earth is chosen at the proper time for being commuted into the level and plan of the temple The site is taken possession of for that divinity whose presence will be invoked and beheld in the temple Those entities that were active in the site hitherto would be redundant,[29] they are asked to leave, with the rhythmic formula (mantra) "Let spirits (bhūta), gods (deva) and demons (rākṣasa) depart and seek other habitations From now this place belongs to the divinity whose temples will be built here" ('Bṛhat Saṃhitā', LVIII 11, 'Īśānaśivagurudevapaddhati' Pt III , ch XXVI, 73-74 , 'Mayamata', IV 1, f, 'Viṣṇu-

[25] The Kṛta Yuga or Satya Yuga, which is the Perfect or Golden age, is followed by the Tretā, Dvāpara and Kali Yugas successively Their duration is, respectively, 4,000, 3,000, 2,000 and 1,000 years of the gods One day of the gods is equal to one year of men ('Manu Smṛti', I 67) 400, 300, 200 and 100 twilight years of the gods precede and follow each Yuga The four Yugas with their Sandhyās are one Yuga (mahāyuga), of the gods

[26] This story is told in other versions in the 'Viṣṇu Purāṇa', I Ch XIII and in other Purāṇas

[27] Ś B VII 4 2 6 7 Earth, the wide, the broad one, is Pṛthivī , Earth, as substance, is Bhū , Earth, as ground, is Bhūmi

[28] In the last verse of the Vanaparva, LXXXI, of the 'Mahābhārata', the sacred site of Kurukṣetra is known as the Uttara Vedi of Brahmā (p 4) Its four corners bear the names of the resident Yakṣas, Ratna, and so on The Yakṣas are held to be the resident divinities, also by the Buddhists , see S Lévi, 'Catalogue Géographique du Yakṣa dans la Mahāmāyūrī' (3-4th century A D ), 'Journal Asiatique', 1915, I p 19 ff , 'Sumaṅgalavilāsinī', S B B III, Pt 2, p 92 , cf P Mus, 'Barabudur', op cit , p 660 "The geomancers recognise the divinities down to a depth of 30 cubits Here dwells a Nāga, here a Yakṣa"

[29] Ś B VII 1 1 5 "With a Palāsa branch (he sweeps) The Palāsa tree is the Brahman He thus sweeps away those already settled "

samhitā', XII 36 f, 'Agnipurāna', XXXIX 16-18, 'Mānasāra', V 4-9, etc) With offerings, gods, spirits and demons are bid to leave This gracious gesture releases their forces and sets the site free from all particular associations In this way, too, it is steadied and expurgated Emptied of its former contents, it retains its receptiveness and the power to assimilate new ones, finally it will have to be levelled and the plan and forecast of the temple will be laid out on the ground

## PURIFICATION, INSEMINATION AND LEVELLING OF THE SITE

Before this can be done the fitness of the soil has to be ascertained by several tests A pit is dug and the earth which has been taken out is put back again In a descending degree of its quality, it then either exceeds the pit in quantity, is level with it or lower, or, water is put into the pit over night the quality of the soil is judged according to the quantity of the water found there in the morning, or, a flame put into the pit burns, or else is extinguished, in the latter instance the soil is unsuitable and has to be abandoned These and other practical tests are described in the 'Brhat-Samhitā' (LII 90-92) and elsewhere,[30] they are performed after the sound, smell, taste, shape or the consistency and colour have been examined, finally, the fertility of the soil must be tested The 'Matsya-purāna' (ch CCLIII 12-18), prescribes according to the colour of the soil, white earth for Brāhmanas, red for Ksatriyas, yellow for Vaisyas, black for Śūdras The castes and the earth correspond magically to the colours Then comes an examination of the flavour of the earth, whether sweet, pungent, bitter, astringent, and its suitability is determined in the same 'hierarchy' When the suitable land has been acquired and the ground is ploughed, seeds are sown and the quality of the soil is tested according to their germination in 3, 5, or 7 nights, etc, and according to the size of the young plants[31] All this is being done to assure oneself of the fitness, and ritual purity of the soil For the same reason all extraneous matter (śalya, 'thorns') has to be removed from the soil,[32] so that it does not stand in the way of the divinities who henceforward will be assigned their places, its presence also forebodes evil to the builder and is felt as an uneasiness and local irritation in various parts of his body Magic is active and divinatory science establishes the correspondence between the soil to be built on and the body of the builder[33] Either has to be made pure by the respective rites,

[30] The 'Bhavisya Purāna', ch CXXX 45-46, prescribes that this pit should be dug in the middle of an area of 4 cubits (hasta) square Its measure should be 10 angulas (the width of the upper phalange of the thumb) square and one cubit deep

[31] See also 'Mayamata', III, IV, 'Kāsyapasilpa', I 56 57, 'Mānasāra', V, etc

[32] 'Īsānasivagurudevapaddhati', Pt III, ch XXVI, 92 f

[33] Magic consists of actions expressive of a will for reality The correspondence is constructed as a token of identity between the soil which will be 'transubstantiated' into the body of the Vāstupuruṣa and the person of the patron as Yajamāna or sacrificer The external signs are a superstition, a residue of the belief in the identity of sacrifice and sacrificer, and with reference to the temple, in the identity of the sacrificial structure and the transformed body of man, the patron

ready for setting up the temple, beginning each work on an auspicious day, and under a favourable star. The purification of the soil is complete when the ground has been ploughed repeatedly ('Kāśyapaśilpa', I. 42-56), watered, sown and planted with all kinds of grain and when these have flowered and ripened. Then it should be ploughed again. Then the earth is clean ('Viṣṇu-Saṃhitā', XII. 36-42).

At the beginning of the various phases in the construction and consecration of the temple, the "rite of the seeds and their germination" (aṅkurārpaṇa) is most important. It precedes the building of the temple ('Vaikhānasāgama', ch. II) and again the rite is observed before the last brick or stone is put into the superstructure (ib., ch. VIII), and once more prior to the installation of the main image and before the rite of opening its eyes (akṣi-mocana, ib., ch. XI) and also prior to the consecration of the sacrificial vessels (ib., ch. XXIX).[34] On the ninth, seventh, fifth or third day, prior to the performance of any of these rites, the seeds of different varieties of rice, kidney-bean, pulse, sesamum, mustard, etc.[35] are placed on a copper vessel, in front of Soma, the Moon, Soma, the totality of all oblations, the Lord of germs, the divinity who presides over formation. The 16 vessels used in this rite are circular like the lunar disc, the number corresponds to the digits of the moon, and further lunar symbols pervade this rite.[36] Their potency is given to the plants as they grow, to each variety in due season.

Vedic rites introduce and accompany the building of the temple. The ploughing and the sowing of the sacrificial ground with all kinds of grain preceded the piling of the Fire altar (agni-cayana).[37] After the introductory libation (prāyaṇīya) of the Soma sacrifice, the altar site was ploughed by twelve oxen, twelve furrows were made and then the seeds were sown. From the making of the Mahāvedi of the Fire altar and the sowing of the sacrificial ground, the rite of auspicious germination (maṅgalāṅkura, 'Kāmikāgama', XXXI. 18, etc.) has remained an indispensable preparation of sacred architecture. "Even as this broad Earth received the germ of all things that be" (AV. V. 25.2), is the Germ (garbha) of the temple deposited in her. The structure of the temple that grows from this Germ absorbs the essence of the earth and transmutes it. Its shape is produced from the power of the earth (bhū), and its form corresponds to the plan laid out on its levelled surface (bhūmi).

The spirits that previously occupied the site have been asked to leave. Tribute has been scattered to them at night and again when they depart before day-break.[38] When the ground is tilled, the past ceases to count, under auspicious stars new life is entrusted to the soil and another cycle of production begins, in assurance that

[34] Also 'Vaikhānasāgama', ch. XIII. 'Without the rite 'aṅkurārpaṇa', all rites performed are futile' (ib., ch. XXX).

[35] Or also of barley, wheat and other alternatives.

[36] 'Vaikhānasāgama', chs. XXIX, XXX; sixteen vessels of each kind if the Yajamāna is a Brāhmaṇa but 4 less respectively for a Kṣatriya, Vaiśya and Śūdra.

[37] 'Kāṇva Saṃhitā', XX. 3. 4; 'Maitrāyaṇīya Saṃhitā', III. 2. 45; Ś. B., VII. 2. 2. 1-14.

[38] 'Mañjarī', quoted in I. P., Pt., III, Ch. XXVI, 74 f.

the rhythm of nature has not been interfered with The sowing of the grain is a final offering to the memory of the spirits who have left the place and gone elsewhere, in peace [39] It is at the same time a first offering in the newly acquired land, so that the temple, the substance of God and his manifestation, might exist Their germination leads to a fulfilment of all their potentialities The grain has the nature of the sacrificial essence itself for it is said in the Śatapatha Brāhmana, from man, the sacrificial victim, this essence passed to the sacrificial animals, it entered into the horse, ox, sheep and goat, and lastly into the earth with its rice and barley, etc (Ś B I 2 3 6-7) Their seeds are sown in the earth, they will germinate, grow, ripen and bear fruit on the site where the temple is to arise The vital assimilation of energies of the soil into the grain and plants is carried further and through vegetation to the cattle on the pasturage "The Sthapati, the chief architect, should graze cows with bulls and calves on the land till it is stamped down by the cows and homage is paid to it by their breath, its impurities are cleaned away by the bellowing of the bulls, it is washed with the milk and froth dropping from the mouths of the calves, smeared with cowdung, decorated with hoof-prints and fallen cud, scented with bovine odour and purified with sacred waters" ('Mayamata', IV 4-8) That the cattle stay on the land, ensures its further purification ('Manu Smrti', V 124) The whole process of plowing, sowing and reaping, of grazing the cattle on the site of the future temple should be repeated after one year ('Mañjarī', quoted in Ī P, l c, 78-f) The plough being consecrated by the touch of the Guru, the chief architect should plough the first three rounds ('Mānasāra', V 85) The preceptor and the builder perform the rite of ploughing and Śūdras complete the work

Now the earth has been ploughed up repeatedly and has become pure and even, so that it only needs to be finally levelled to be ready for the drawing of the Vāstupurusamandala, the metaphysical plan and forecast of the temple

"The ground should be perfectly even all over, like a mirror" (Ī P, Pt III ch XXVI 79) Prthivī, the Earth, is here the levelled ground from which the temple rises Her terrestrial surface (bhūmi)[40] has now been properly prepared, as far as the building ground extends, the earth has yielded to the demands of King Prthu It has been made even and symbolically raised to a new level The levelling of the earth as a rite is an execution of the First King's insistence that order should be established in a wild, unruly, and errant world This is done in turn by the builder of every temple Once, it is also said in another connexion, the earth itself became level This took place at the birth of the Buddha who, as

[39] Similarly, the axe which is to cut the tree for the sacrificial post is invoked while it is employed "O axe, hurt it not", and prior to the fatal blow, a blade of Darbha grass with its point upward is laid on the tree after having uttered the words "O herb, protect it" (the sacrificial post), (Ś B, III 6 4 10) Afterwards an offering is made above the cut surface, with the prayer that the tree may grow up again with a hundred branches ('Āpastamba Śrauta sūtra', VII 2 4 and 8)

[40] Prthivī, earth, the broad one, was perceived first by Prajāpati, the Boar, on a lotus leaf, with the words "now this has come into existence (abhūt)" From this, earth is called 'bhūmi' ('Taittirīya Brāhmana', I 1 3 5-6, cf 'Taittirīya Samhitā', VI 2 6 3, where that sacrificial site is called 'firm' or established which is even on all sides)

soon as born, stepped forth upon the earth and beneath his steps the earth lay smooth and even, for by his footfalls the Law (dharma) was carried throughout the world and became universal The levelled earth became its substratum [41]

After the ground is rendered as level as the surface of water or of a mirror it should be made a perfect square ('Hayasīrsapañcarātra', VIII 136) In practice, the actual size of the square need not necessarily be co-extensive with the site, nor even with the building of the temple It may however be equal to any one of these or else of a definite size The 'square field' is a symbol and its meaning remains unchanged if its measure is given as five or eight cubits square [42]

The 'Śatapatha Brāhmana' (I 2 5 7 ) explains that the sacrificial ground is called Vedi because the gods obtained (sam-vid) the entire earth by encompassing the sacrifice on the four sides The sacrificial ground or altar ground (vedi) is a symbol of the earth, as large as is the Vedi so large is the earth [43]

The surface of the earth, in traditional Indian cosmology, is regarded as demarcated by sunrise and sunset, by the points where the sun apparently emerges above and sinks below the horizon, by the East and West and also by the North and South points It is therefore represented by the ideogram or mandala of a square [44] The identification of the square with the Vedi is in shape only and not in size and belongs to the symbolism of the Hindu temple The Vedi represents and is the levelled earth, a place of sacrifice or worship "No part of the ground should rise above it, for it was from there that the gods ascended to heaven" (Ś B III 1 1 1-2) The site, the earth, should be even and firm, for it is the starting place of the ascent (Ś B VIII 5 2 16) The link between the earth and the end of the ascent stretches upward into space, the intermediate region (antariksa) From it also it leads downward and rests on earth In it the temple has its elevation The Vāstupurusamandala, the temple-diagram and metaphysical plan is laid out on the firm and level ground, it is the intellectual foundation of the building, a forecast of its ascent, and its projection on earth

[41] P Mus 'Barabuḍur', BEFEO, vol XXXIV, p 210

[42] 'Śāradātilaka', ch III 3 comm , quoting 'Mahākapilapañcarātra' , see note 10

[43] RV I 164 35 , 'Mādhyandina Saṃhitā', XIII 62 , Ś B III 7 2 1 Vedi=Pṛthivī , RV X 110 4 , Ait B I 5 28 , Tait B I II 1 1 , Ś B IX 4 2 3 , XII 8 2 36

[44] The square does not refer to the outline of the earth It connects the 4 points established by the primary pairs of opposites, the apparent sunrise and sunset points, East and West , and South and North The earth is therefore called 'caturbhṛṣṭi', four cornered (RV X 58 3) and is symbolically shown as Pṛthivī mandala, whereas considered in itself, the shape of the earth is circular, RV X 89 4 , Ś B VII 1 1 37

# II

# THE PLAN

ઉચ્છિષ્ટે નામ રૂપં ચોચ્છિષ્ટે લોક આહિત ।
ઉચ્છિષ્ટ ઇન્દ્રશ્ચાગ્નિશ્ચ વિશ્વમન્ત સમાહિતમ્ ।।૧।।
ઉચ્છિષ્ટે દ્યાવાપૃથિવી વિશ્વં भूतं સમાહિતમ્ ।
आप સમુદ્ર ઉચ્છિષ્ટે ચન્દ્રમા વાત आहित ।।૨।।

"Name and Form are in the Residue The world is in the Residue Indra and Agni are in the Residue The Universe is in the Residue Heaven and Earth, all Existence is in the Residue The water, the ocean, the moon and the wind are in the Residue "

'Atharva Veda', XI 9 1-2

# II

# THE PLAN

Prthivī, the element and goddess Earth (bhū), yields her surface, it is the ground (bhūmi) of architecture ritual, as it is the realm of manifestation, and of bodily existence, "it is the place where mortals and immortals reside (vas) The following four are considered as Vāstu, residences, by the ancients who were experts in architecture Bhūmi, the ground, Prāsāda, the temple or palace, Yāna, the conveyance, and Śayana, the couch Bhū, the earth, is considered the main Vastu, it is the underlying stratum of existence Those that originate therefrom, the Prāsādas and other works of architecture are Vāstu (dwelling places, planned sites), because they are Vastu (existing things) and have their support on Vastu (an existing, concretely real thing)" ('Mayamata', II 1-3a) Of these four classes, Bhū, the earth, is described first in the 'Mayamata', and the other treatises on architecture because "it is the first of the elemental principles (bhūta) and a support for the existence of the world" (ibid II 9) [1]

Vāstu, is primarily the planned site of the building Its shape is square as a rule and its full name is Vāstupurusamandala This name consists of three parts, Vāstu, Purusa and Mandala

Vāstu here, is the extent of Existence in its ordered state and is beheld in the likeness of the Purusa The image of the Supernal or Cosmic Man, the Purusa, is congruous and identical to the planned site

Purusa, Cosmic Man, the origin and source of Existence (aparā-prakrti), is its instrumental or efficient cause (nimitta-kārana) and causes it to be of His substance as its material cause (upādāna) This is how He is known in the world, the manifested aspect of Himself, the Parā-prakrti, the Beyond-Existence, the Avyaya Purusa, the immutable, Supreme One (Uttama-Purusa) In his identity with the 'plan', Purusa is shown in his conditioned aspect The plan makes the site of the building in his image which is his form The plan of the building is in the likeness of the Purusa, or of the totality of manifestation

Mandala denotes any closed polygon The form of the Vāstupurusamandala is a square This is its essential form It can be converted into a triangle, hexagon, octagon and circle of equal area and retain its symbolism ('Brhat-Samhitā', ch LII 56, comm )

[1] The 5 'bhūtas'—earth, water, fire, air and ether—are the first or lowermost of the 24 principles (tattva) of the world of duality (ātma tattva)
Vāstu, with long ā is derived from Vastu, with short a

The relation of the Vāstupurusamandala to the site-plan, ground-plan and vertical section of any building is similar to that of the tonic and any musical composition The Vāstupurusamandala gives the principle of all planned architectural form and the prototype of its various rhythms Vāstu-śāstra speaks of Talacchanda or Adhaschanda, the rhythm of the level and of Ūrdhvacchanda, the rhythm of the elevation implying the proportionate measurement which connects the ground-plan and the vertical section of a building

The Vāstupurusamandala is the plan of all architectural form of the Hindus The site-plan, the ground-plan, the horizontal and vertical sections are regulated by its norm Originally and in practice the site-plan is laid out according to the Vāstupurusamandala, and the 'general form of the temple' (sāmānya prāsāda, Part VII) given in the earlier texts, rests on the Vāstupurusamandala

## SQUARE AND CIRCLE
## VEDIC ORIGINS

"The shape of the Vāstu for gods and Brāhmanas is prescribed as square" ('Mayamata', III 1)[2] The square is literally the fundamental form of Indian architecture Baudhāyana's prescription how to make a square (caturaśrīkarana) requires a cord (sūtra) of the desired length of the square, its division in half, fixing of poles in the middle of the east-west line and at the cardinal points, and the drawing of circles from these points with the length, and half the length of the cord respectively as radius The exterior points of intersection of the four circles about the eastern, southern, western and northern poles with a diameter equal to the length of the cord are the four corners of the required square field[3] The square is the essential and perfect form of Indian architecture It presupposes the circle and results from it Expanding energy shapes the circle from the centre, it is established in the shape of the square The circle and curve belong to life in its growth and movement The square is the mark of order, of finality to the expanding life, its form, and of perfection beyond life and death

Square and circle are co-ordinated in the architecture of India from the Vedic Fire altar, Agni The Fire (Agni) and its support, the altar, are one in name The 'Śatapatha Brāhmana' and the 'Śulva Sūtras' give the rules for piling up these hearths or altars In the sacrificial shed (prācīna-vamsa-sālā) are three

[2] Also 'Vāstuvidhāna' of Nārada (Ms 1602, Adyar Library), VIII See Appendix

[3] 'Baudhāyana Śulva Sūtra', I 22-28 The very same method of constructing the square with the help of circles is prescribed in later texts with reference to the square of the Vāstupuruṣa (for instance, 'Śāradātilaka', III 6, VI 3-7), it is similar to the method prescribed in the 'Āpastamba Śulva Sūtra', VIII 8-10, XI 1 where a bamboo rod is rotated The construction of the square by rotation, of rod or cord, is however not the only one Three further methods are prescribed in the 'Śulva Sūtras' ('Āpastamba Śulva Sūtra', I 7, 'Baudhāyana Śulva Sūtra', I 29 35 and 'Āpastamba Śulva Sūtra', I 2) where the square is constructed by the stretching of the cord only, and without rotation (B B Datta, 'The Science of the Śulba', pp 55-62) See also Part VII

altars, two of them on the east-west line in the middle, the 'easterly spine' (prācīnavaṃśa), and one to the south of the line. Of the two altars on the east-west line, the one at its eastern end is square, the other at its western end is circular. The square one, on which burns the Āhavanīya fire, denotes the heaven (dyau) world; from this celestial fire all other fires are subsequently lighted.[4] The circular one, the Gārhapatya hearth, denotes this terrestrial world. The third hearth, which is that of the Southern fire, Dakṣiṇāgni, denotes the air-world (Ś B XII 4 1 3).[5]

The square Āhavanīya hearth at the eastern end of the sacrificial shed is in the middle of an area, one fathom (vyāma) square. In the Soma sacrifice, the highest of all sacrifices, after the initiation of the sacrificer, the square Āhavanīya hearth makes way on the first Upasad day[6] for the new brick-built Śālādvārya Gārhapatya which has one fathom square for its area (Ś B VII 1 1 37)[7] and is round in shape.

Outside, to the east of the sacrificial shed, at a given distance a plot is demarcated; this is called the Mahāvedi.[8] The square High altar, Uttara Vedi, is on its eastern side.[9] The Uttara Vedi, too, symbolizes the heavenly world (Ś B VII 3 1 27). *In the centre of the Uttara Vedi is a small square, its* 'navel' (nābhi), one span (vitasti) square (Āp Ś S VII 5 1).

The square is the shape of the Uttara Vedi, the High altar; it is also the shape of the hearth of the celestial Fire, the Āhavanīya Agni; it is the shape of the centre, the Nābhi, of the Uttara Vedi, and also of the Ukhā, the pan in which the celestial fire is carried from the Āhavanīya Agni.

[4] The fire is first lighted by friction of wood on the Gārhapatya hearth. From the Gārhapatya the fire is transferred to the Āhavanīya hearth.

[5] The rules and measurements of the Agni and the Vedi are given in the Brāhmaṇas (c. 2000 B.C.). The [illegible] of the Karmavidhi, the rules for the performance of the sacrificial rites. The Śrauta Sūtras ([illegible] B.C.) contain the rules for the rites ordained by the Vedas. Each Śrauta Sūtra seems to have had its Śulba Sūtra, or section dealing with the measurements and the 'geometry' of the altar.—The Vedi is the sacred ground measured out for the sacrifice ([illegible], PW, VIII [illegible]). In the '*Śatapatha Brāhmaṇa*', VII 1 1 37, VII 2 2 2 ff. are complete descriptions of the Gārhapatya and Āhavanīya hearth.

[6] The Upasad days are counted from the commencement to the completion of the altar (Agni).

[7] SBE, Vol XLIII, p. 302. Vyāma, a fathom, is the distance between the tips of the middle fingers when the arms are stretched out horizontally. *The length of a fathom is* also the height of a man, from the sole to the root of the hair on the forehead, and remains throughout Indian art and symbolism the perfect proportion; cf. Weber, 'Indische Studien', XIII, p. [illegible].

[8] The Mahāvedi is a trapezium, its 'prācī' or middle line in the E-W direction measures 36 units ('prakrama' or 'pada'), the east side 24 units, the west side 30 units. 1 prakrama = [illegible] pada, 1 pada = 10 aṅgulas or 15 [illegible] or also [illegible] ('Taitt Saṃh', VI 2 [illegible], 5; 'Mānava Śulba Sūtra', ch IV). The Mahāvedi is also called Saumikī Vedi and is situated in the open to the east of the sacrificial shed (prācīnavaṃśaśālā) for the purpose of the Soma sacrifice. The Vedi in the shed, between the three hearths, is rectangular with concave, curved sides (cf. the drawing in SBE, vol XXVI, p. 475 and W. Caland and V. Henry, 'L'Agniṣṭoma', I, Pl. IV). Neither of these Vedis is square.

[9] The Uttara Vedi is the principal—and primary—Vedi.

The Ukhā, the earthen fire pan (Ś B VI 5 2 8), has the shape of a cube It is the earthen 'womb' of the Fire (Agni, Ś B VI 5 2 21)[10] In the Soma sacrifice, the celestial sacrificial fire is transferred daily from the Āhavanīya hearth to a seat of Udumbara wood by the sacrificer in an initiation of one year's duration, the fire is transferred in the pan, the Ukhā (Ukhya Agni) serving as Āhavanīya Agni On the first day after the initiation, a new round Gārhapatya hearth is built Its new site is the space of a fathom square in the centre of which was the original square Āhavanīya hearth The new Gārhapatya hearth (Śālādvārya), near the eastern entrance of the sacrificial shed, is built of brick Its area is equal to one fathom square It preserves its identity in its name, Gārhapatya, and in its round shape The domestic fire (Gārhapatya) of the sacrificer has now been transferred to the place of the celestial fire (Āhavanīya) not only by its position but also by its extent The circle of the Gārhapatya, now situated in the east of the sacrificial shed is equal to a square of one fathom Its nucleus in the centre is also square

The Purāna Gārhapatya, the old Gārhapatya hearth, was of terrestrial nature This now, at the completion of the initiation, is commuted in the Śālādvārya Gārhapatya, to its celestial nature and destination

The centre of the new Gārhapatya hearth is laid out in the shape of a cross four large rectangular (2 'pada' by 1 'pada' each, double square) bricks, in one line from North to South, to which are added two bricks at the back and two in front (1 square pada each), that is West and East, these four bricks are half the size of those North to South To these are added further bricks which fill the corners in the intermediate directions of the square area inside the round Gārhapatya hearth To these, further bricks are added, they fill the round periphery with its 21 enclosing bricks (Ś B VII 1 1 17-19) The new Gārhapatya hearth has the shape of a circle equal in area to a square fathom (vyāma = a man's length)

Each kind of sacrifice requires an Agni (altar) of prescribed shape (and size) Sacrifices are (1) obligatory, daily or seasonal and (2) undertaken for the purpose of wish fulfilment

The *main altars for the daily (nitya)* sacrifices are the Āhavanīya, Gārhapatya and Dakṣina Amongst the seasonal or recurrent sacrifices, the Soma sacrifice necessitates a Vedi = altar-ground, outside the sacrificial shed, the Mahāvedi or Saumiki Vedi, and on it, the Uttara Vedi, and a Fire Altar (Agni) Their construction, form and meaning as well as those of the abovementioned hearths, are fundamentally important to the Hindu temple The Soma sacrifice entails the building of the Agni, the Fire Altar, which is piled above the Uttara Vedi on the Mahāvedi This rite is called Agnicayana, the piling of the Fire Altar The 'Śatapatha Brāhmana' gives its rules and meaning This big sacrifice must be performed in a Vedic Hindu *family* at least once in three generations

The brick-built Gārhapatya altar is proper to the Soma sacrifice Weber, l c Vol XIII, p 242

About the Kāmya Agnis, the fire altars of different shapes for sacrifices performed with the purpose of attaining definite objects, see Thibaut, 'On the Śulva Sutras', JASB, 1875, and N K Majumder, 'Sacrificial Altars Vedis and Agnis', JISOA, Vols VII and VIII, the one of falcon shape (caturasra syena citi) is the most relevant The Kāmya Agnis are not directly related to the Hindu Temple

[10] The Ukhā is burnt with fire of the Dakṣināgni, or with newly made fire Weber, op cit, vol XIII, p 225 f

"The Gārhapatya is this (terrestrial world) and this world is circular" (Ś B VII 1 1 37) The earth as the terrestrial world, in Vedic tradition, is symbolised by the circle, and by the round Gārhapatya hearth in contradistinction to the square of the Āhavanīya hearth which stands for the heaven world During the year of initiation the round hearth of the earthly fire is re-built, at the place of the celestial fire and to the extent of its square site In this architectural rite it is transferred to another place where it is identical, by measure and position, though not outwardly by shape, to the site of the altar of the celestial fire Agni is the name of the Fire wherever it burns and the altar, Agni, is its support, terrestrial or celestial, according to its shape

The Vedi, in Vedic tradition, represents the extent of the earth It is an area for sacrificial purposes The shape of the Vedi varies It is symbolical as a delimited area and not as a definite figure The Uttaravedi is square and it is said "*the Vedi is the earth, the Uttaravedi the heaven world*" (Ś B VII 3 1 27) This is its symbolic value by virtue of its squareness

In the Hindu temple, it is the square Vedi which makes the sacred ground The circular aspect of the earth is left behind, it belongs to the world of appearance and its movement, the earth is beheld itself under the perfection of the heavenly world and, knowing this perfection, is drawn as a square [11]

On the last day of the initiation (dīkṣā), the Mahāvedi is measured and demarcated and on it the area of the Fire altar which is to be built, so that the fire in the Ukhā can finally be deposited on it, having been brought from the new Gārhapatya (sālādvārya) Of the Agni now to be built, first the body (ātman) is thrown up on the Mahāvedi, the altar ground, which has been ploughed and sown during the introductory sacrifice (*prāyaṇīyam*) *on the day following* the last day of the initiation The Agni lies symmetrically on the East-West line, the middle line or spine of the Mahāvedi, close to its east side ('Kātyāyana Śrauta Sūtra' XVI 7 31) The body (ātman) of the altar is laid out square "Agni piled up for the first time should be without wings and tail and measure one square 'puruṣa' A bamboo rod is the measure, it measures the length of the sacrificer when he stretches up his arms" (Āp Ś S XVI 17 8-10) It is also laid down that the body (ātman) of the bird-shaped Agni has an area of 40 square feet (pada) or 4 men's length (puruṣa) square in an area of 7 men's length square (saptapuruṣa) [12] "With man's measure he (the sacrificer) metes out Man is commen-

[11] Under this aspect the earth is known in RV X 58 3 (caturbhṛṣṭi), VII 99 1 (catussrakti), Ś B VI 1 2 29 (catussrakti) On this knowledge are based the square maṇḍala of the earth, Pṛthivīmaṇḍala, and the square Vāstupuruṣamaṇḍala of the Hindu temple (see Part I)

[12] Of the bird shaped Agni it is said (Ś B VI 1 2 36) "For what object is this fire (altar) built? 'Having become a bird, he (Agni) shall bear me to the sky', so say some, but let him not think so, for by assuming that form, the seven breaths [(prāṇa) in the sense of the Greek 'pneuma'] became Prajāpati" (cf VI 1 1 5-6), "by assuming that form Prajāpati created the gods, by assuming that form the gods became immortal and what thereby the immanent breaths and Prajāpati, and the gods became, that indeed he (the sacrificer) thereby becomes" (trans Eggeling, S B E XLI)

One 'puruṣa' is the length of man standing on tiptoe (or not) with raised arms, it measures 5 'aratni' (the length from the elbow to the tip of the little finger, an ell) or 'hasta', the distance between the elbow and the tip of the middle finger, or 10 'padavitasti' (span),

surate with the sacrifice" (Taitt Samh V 2 5 1) "As much as a man with arms extended, with so much a bamboo rod (the Fire altar) is meted out" ('Maitrāyanīya S' III 2 4) He metes it out with (the measure of) man (purusa) with arms extended "Verily the sacrifice is a 'purusa' and hence by it, all these are measured, and that is its best measure inasmuch as with arms extended he (man) has his maximum measure" (Ś B X 2 2 6) Man in his maximum measure is the standard of measuring the Agniksetra, the square field of the Agni

The square Ātman within the Agniksetra has two spines (vamsa, pristhya), the main one, in the East-West direction coincides with the middle line of the Mahāvedi, the other cuts across it at a right angle [1] Where the middle lines meet the sides of the square 'body' an earthen brick (logestakī) is laid down on each side From the point, which is to be the centre of the Ātman and of the Agniksetra and where a bundle of Kusa grass has been placed, the Uttara-Vedi is now thrown up, a square mound or platform [11] The earth for it has been taken from a square pit (cātvāla) of the same content Its height is made equal to that of the earth bricks in the middle of the sides of the body (ātman) of the Fire altar The remaining area of the Ātman is then filled up (with sand) to the same height The Uttara-Vedi, the High altar, is made part of the first layer (citi) of the Fire altar The 4 earth-bricks and the Kusa grass bundle in the centre are counted as 5 'bricks' of this first layer (Ś B X 4 3 14)

The Navel (nābhi) in the centre of the Uttara-Vedi, the High altar, is square and measures a span,[1] it is the centre of the sacrifice There, originally, the fire was laid and it is here that the symbolism of the square has its root in the Vedic rites [16] The Ukhā, the fire-pan made of clay, in which the Fire (Agni) is carried from the Āhavaniya hearth, to the Agni, the Fire altar, piled above the Uttara-

Weber, l c p 239 These are relative measures, they vary with the height of the sacrificer The cubit 'hasta'=2 'padas'=24 angulas is the generally accepted unit in Hindu architecture

A 'purusa' is the measure of man with arms raised Vyāma, the measure of man from the soles to the root of the hair on the forehead, is equal to one fathom The latter is the standard of measure for the altars of the daily sacrifices The Agni of the Soma sacrifice is measured with man's greatest measure

The length of a 'purusa' is standardised as 120 angulas Angula is the width of a finger, i e, the thumb (see Part V) A Vyāma has 120 or else 96 angulas Generally however 'purusa' and Vyāma denote a length of 120 angulas This explanation is given in the commentary by Bhattabhāskara Misra of the 'Taittiriya Samhitā' (Mysore Oriental Library series, Bibl Sanskr, No 15, pp 134 136) The 'Samarāṅganasūtradhāra', IX 45, however, gives 84 angulas as equal to 'vyāma=purusa' Re the different types of angula, see Part V

[13] The Agniksetra, the complete extent of the Fire altar, has 95 increasing sizes, the area of each being increased by one-seventh of the original size (1 square purusa), Weber, l c p 240

[14] The measurement of the Uttara-Vedi is given in Ś B VII 3 1 27, cf also 'L'Agnistoma', op cit, I p 75

[15] Prādesa, or it has the length of a bull's foot or a horse's foot ('Āpastamba Ś S' VII 5 1)

[16] K F Johansson, 'Die Altindische Gottin Dhisanā', p 51, speaks of the Uttara Vedi as more ancient than the Vedi of the Prācīnavaṃsa —The sacrifice itself is called 'bhuvanasya nābhih', RV I 164 34

Vedi, is necessarily square in section, it measures a span as does the Nābhi It is spoken of as the womb, and its cube holds the entire manifested universe, its under surface being this world, the lower part of its sides is the air, the upper portion is the sky (Ś B VI 5 2 22) This womb of Agni survives its name and retains its function and to some extent its form in the shape of the Phelā, which is the 'womb' of the temple (Pt IV), and also in the Garbhagrha, the 'womb chamber' of the Embryo, or innermost sanctuary of the temple It also is generally built on a square plan and is cubical The navel and womb as places of generation and continuity are images which endure They are fitted into the square, not in any way as visual symbols, but in virtue of their function, the one accommodating the celestial Fire and the other the Garbhagrha with the image or symbol of God

The square, as fundamental figure of sacrificial symbolism and temple architecture, lends itself to many variations Baudhāyana prescribes the construction of the Sārārathacakracit and the commentator explains how to form it first a small square with 4 bricks in the middle of the Agniksetra then to enlarge this square, to one of 16, etc This method has become known in the West, through Aristotle, as the Pythagorean 'gnomon' [17] It is in this way too, that the various types of the Vāstumandala are enumerated in Vāstusāstra in a progressive series of 1, 2, 3, 4 units square, etc , the most sacred being the plan of 64 squares, preserving the meaning of 64 which is exemplified in "64 bricks form the spokes of the wheel, 64 the Vedi [18]

In general a brick in the Brāhmanas is one foot square, or its multiple or sub-multiple [19] It is a natural unit and its name 'istakā', which denotes a brick, has remained the name of any building 'stone'

The description of the Gārhapatya (sālādvārya) as a circle equal in area to the square of one fathom is given in the 'Śatapatha Brāhmana' (VII I I 37) [20]

[17] G Thibaut, 'On the Śulva Sūtras', JASB , 1875, p 200 f , T L Heath, 'History of Greek Mathematics', Vol I p 77

[18] G Thibaut, l c quoting 'Baudhāyana Śulva Sūtra', III, with reference to the Sārārathacakracit In this particular instance, three consecutive squares are constructed The central one of 16 squares for the nave, that of 64 squares for the interior edge of the felloe, and the third square as its outer edge These squares are then turned into circles

The Vāstumandala of 64 squares is, according to Varāhamihira, prescribed for the temple ('Brhat Samhitā', LV 10 , cf Part I) It is its original plan Utpala, however, commenting on LII, 73, admits the Vāstumandala of 81 squares for all kinds of temples, regulating the rhythmical disposition of their ground-plan (adhaschanda, talacchanda), etc , whereas palaces, etc , must have a Vāstumandala of 81 squares —The royal mandala, it appears, is thus admitted and established in the sacerdotal field

[19] Ś B VIII 7 2 17 prescribes one foot square The bricks are classified as 'padya, ardhapadya, padabhāga' according to their side length of one foot, a half and a quarter foot respectively (Weber, l c ) , the 4 bricks which form the 'body' of the Gārhapatya hearth are rectangular, twice the length of the square bricks laid at the front and back, east and west , Ś B VII 1 1 18 This makes the centre of the round Gārhapatya hearth a square (p 253)

According to Āp Ś S , XVI 13 6 bricks may also measure one 'aratni' or ell, or the length of the thigh or the upper spine The unit of the measure of the sacrificial body which the sacrificer builds up for himself is always taken from his physical body

[20] In the 'Śulva Sūtras' various (approximate) methods are given for the circling of the square and the squaring of the circle That for circling the square is identical in the various

The square shape of the *Āhavanīya* hearth, of the *Uttara Vedi* and the other sacred centres and objects cannot as an alternative be circular, whereas the Gārhapatya, fundamentally circular, may be set up on a square or circular area according to one or the other school.[21] That is, the 'earth' may be thought of as round, in its own shape or square in its figure ordered by the law of the 'heaven world'.

Because it is the perfect shape the square is sacred in the hierarchy of Indian architectural symbolism, the square is of greater significance than the circle.

Sūtras, whereas alternative methods are given in the Sūtras for squaring the circle. The circling of the square is described and its various methods are given in translation by B. B. Datta, op. cit. pp. 140-149, from the Śulva Sūtras of Āpastamba, Kātyāyana, and Baudhāyana.

[21] Āp. Ś.S. XVI. 14. 1, and elsewhere. Similarly too, the Dhiṣṇya hearths are piled on a square or circular (base), Āp. Ś.S. XVII. 21. 5.—Analogously, the funeral mound (śmaśāna) is either square or round. Ś.B. XIII. 8. 1. 5. See also Caland, 'Die Altindischen Todten und Bestattungsgebrauche', p. 141.

## THE SQUARE MANDALA OF THE EARTH AND OF THE ECLIPTIC

The earth is round  The Brāhmanas repeatedly say that the whole earth, once floating and mobile remained in this condition until the cardinal points, becoming fixed themselves, also fixed the earth  In its fixed position it is spoken of as four-cornered (caturbhrsti, RV X 58 3) or four pointed (catussrakti, Ś B VI 1 2 29)  These points are where heaven and earth seem to meet, where the sun appears to rise and set, East and West, and the other cardinal points complete the square  The earth, in its contact with heaven of which the sky is the figure, is kept in position by this contact, by the regular appearance and disappearance of the sun, at these points, which are the seal on the marriage of heaven and earth then contracted  The four cardinal points, the four orients, are beheld periodically and become known as perpetually recurring, permanent in a cyclical sense, by which the days are measured and time  In Indian symbolism, the earth, fixed and ruled over by time, is known as, and correspondingly drawn as, four-cornered, each side of the square ruled over by the regent of the cardinal point situated at its middle  Whereas the earth, as the surface of this world which supports the movements and weight of our bodies, is round, the earth held in the embrace of the sky and subject to its laws is represented as fixed four-fold  The Prthivī-mandala, therefore, is a square mandala or cakra ('Vāstuvidhāna', 1 c )

Thirty-two divinities are assigned to the outermost border of the square Vāstumandala (Fig on p 32)  The number 32, geometrically, results from a repeated division of the border of the square  It denotes four times 8 positions in space  The original value of 4 in space are the four directions, 8 are the cardinal points and the corners of the square in the intermediate directions  This is the natural division of the border of the square  The 8 directions are held by 8 Vāstupurusas, each having his name and position  These 8 are their visualized potencies within the total Vāstupurusa, they are each associated with one of the planets and also with one of the leading stars of eight of the Naksatras or houses of the moon [22]

Born from the contact of heaven and earth, brought about by the apparent movement of the sun, the eight directions are presided over each by a planet and its regent  Their terrestrial powers in space are determined by celestial powers in time

The square, with reference to the level of the earth, is the graph of the pair of opposites initially marked by sunrise and sunset and caused by the daily apparent movement of the sun  These successive and recurrent critical moments are given a permanence by the symbol of the square on which they are shown stationed opposite one another  The balance of their positions is made conclusive

[22] The 'Matsyapurāna', ch XCIII, 10-16, moreover distinguishes between the regents (adhidevatā) and the secondary presiding divinities (pratyadhidevatā) of the planets, etc

by marking the South and North points as the second corresponding pair of opposites and by connecting these points by straight lines, where they meet at right angles, are the intermediate directions North-East, South-East and so forth, so that by a geometrically progressive series the original two points engender four and eight, sixteen and thirty-two These stations are marked along the outline of the square diagram, 32 divinities are assigned to the 32 fields in the outer border of the square (Fig on p 32) A cyclical sequence is held in the square by the pairs of opposites They encompass all manifestation, in terms of space, as it is beheld on the level of the earth This initial translation of the rhythm of time into a pattern in space forms the basis of larger cycles than that of the day, they also are supported by the square drawn on the ground

Over the 8 Vāstupurusas, over the eight points of the compass, preside the regents of the planets and each Vāstupurusa has his star[23] (chart on page 38) The planets, Jupiter, Mercury, Mars and Saturn rule over the four points of the compass with reference to the Ecliptic [24]

The Ecliptic, the great circle on the apparent sphere of the sky which the sun and the moon seem to traverse, has its symbol in the square Vāstumandala The square compass of the directions symbolises at the same time the apparent daily movement of the sun and the apparent monthly and annual movements of the moon and the sun The former is shown by the lunar mansions, the Naksatras, whereas the signs of the Zodiac are not entered in the Vāstumandala

The Ecliptic is drawn in India as a square and this coincides in the Vāstumandala with the square compass of the orients and all directions The square symbol of the Ecliptic represents the different cycles and the enclosures in space that are separately traversed by the celestial bodies and also the number of units of time taken by the bodies in traversing such an enclosure [25] At present in Indian astrology, the Ecliptic is drawn under the name of Rāśi-cakra, the wheel, a closed polygon, of signs, as a square Zodiac The astrologer bases his calculations and predictions on this square of which he divides each side into four The position of the heavenly bodies is represented by him on the ground by a

[23] The 8 Vāstupuruṣas are called by the following names in the 'Brhat Samhitā', commentary of the 10th century, and the 'Vāsturājavallabha' of the 15th century Wilderness or Crow, Flag, Crow or Smoke, Lion, Dog, Bull, Monkey and Elephant These are place marks indicative of the favourable potencies or the auspiciousness of a particular direction They represent a chthonic correspondence to the eight directions of space and belong to a tradition different from that of the one and comprehensive Vāstupuruṣa, in whose diagram they come to have their place Utpala speaks about them as forming part of the knowledge of 'other Ācāryas' then Varāhamihira

[24] Mus, 'Barabudur', BÉFEO, XXXII, p 420 The East, however, (chart on p 38) is presided by the Moon, and Mercury (Budha) is assigned to the South-West

[25] The 'Sūryaprajñapti' (G Thibaut, 'On the Sūryaprajñapti', JASB, Vol 49, pt I, p 117) and the Purānas explain 3 different motions of the sun (1) the daily motion The sun seems to approach from the east, passes through our field of vision, disappears in the west, (2) the annual motion The sun seems to pass in the course of a year through the circle of the Nakṣatras, proceeding from west to east (3) The motion in declension The sun ascends towards the north during one half of the year and descends towards the south during the other half

sub-division and bordering of the square, the four squares in the centre being obliterated. The 12 signs of the Zodiac are assigned to the 12 squares of the border.[26] The 12 signs of the Zodiac are identical in number to the 12 Ādityas who are the different manifestations of the one Sun god in the 12 stages of his journey.

In the Vāstumandala on which all architecture rests, the border of the square cycle of the Ecliptic is not sub-divided into 12, but into 32 units. This original number of the symbolism of space accommodates, within the border of the square of the Ecliptic, the "32 Naksatras".[27]

The Naksatras are the constellations or lunar mansions through which the moon passes in his monthly course. They are a scale of 27 or 28 divisions, capable of representing time intervals as well as spaces. Each Naksatra has a leading star and is presided over and sacred to a particular divinity. The 27 and 28 divisions of the Ecliptic become fixed in position like a great, fixed, square dial with the numbers ranging not along the Equator, but along the Ecliptic itself.[28] The square, cycle of the Ecliptic, would thus have to be sub-divided into 27 or 28 compartments. Instead of this, the number of Naksatras is augmented to 32, so that each field of the border represents a lunar mansion or Naksatra. In the Vāstumandala their number is thus adjusted to the helio-planetary cosmogram[29] of the Prthivīmandala. There, the four cardinal points, with reference to the Ecliptic are the equinoxial and solstitial points in the annual cycle. The solar cycles of the days and years are shown in the Vāstumandala together with the lunations, the monthly revolutions of the moon round the earth. The solar-spatial symbolism is primary and the lunar symbolism is accommodated within the Vāstu-diagram.

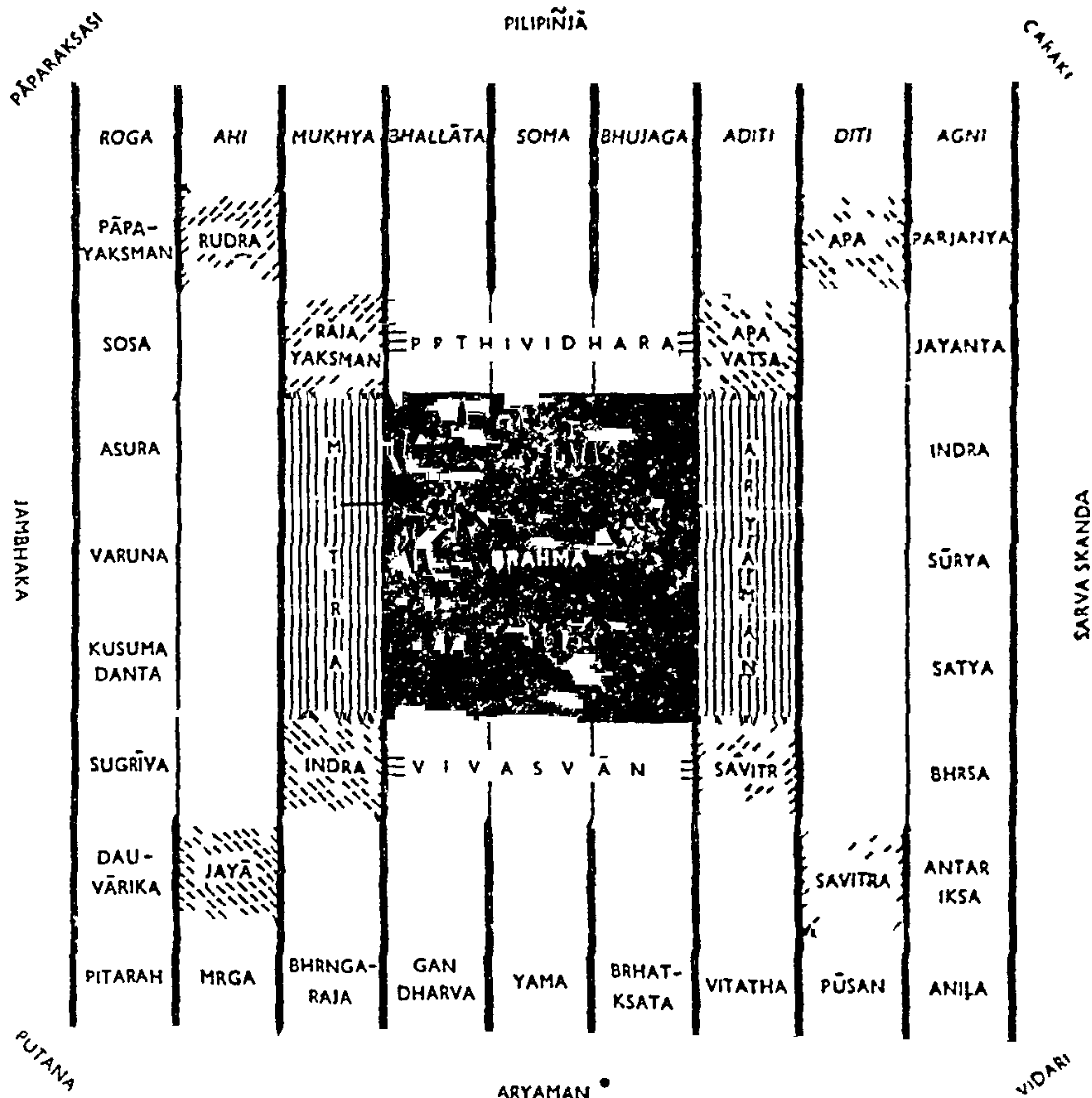
The square 'cakra' or mandala is a closed polygon symbolical of recurrent cycles of time. Prthivī-mandala, and Vāstu-mandala are both squares, the one connotes the earth ruled in its life by the apparent movement of the sun and filled in its extent by the equilibrium of the pairs of opposites on which this order is established. In its whole extent it is a Vedi, and this is also true of the Vāstumandala into which it is incorporated. In the form in which the Vāstumandala is the 'plan' of the temple and regulates the rhythms of its groundplan (adhaschanda, talacchanda) a further accentuation of its squareness is the rule. In the sub-division of its sides or borders from four to eight and up to thirty-two, the original geometrical progression, fixing positions, can be seen at work. The 32 positions, four times eight in space, are held by divinities identified with those of the mansions of the moon, by some schools. The border in its continuity is associated with the course of the moon, and inasmuch as it faces the eight directions it is associated with the stations of the sun.

The Vāstu had come to be the place of the adjustment of solar and lunar cycles. The number 32 of the divinities residing in the squares of the border of the Vāstumandala is also the sum of 4 and 28, the number of the regents of the

[26] C P S Menon, 'Early Astronomy and Cosmology', p 36.
[27] The 'Viṣṇudharmottara', Pt II, ch XXIX, 24, speaks of 32 Nakṣatras.
[28] Cf W Brennand, 'Hindu Astronomy', p 39.
[29] P Mus, 'Barabudur', op cit, p 420.

four planets who rule over the equinoxial and solstitial points referred to the cardinal points, and of the regents of the 28 Naksatras  Their location in the Vāstumandala shows a reconciliation of the motions of the Sun and the Moon, and they have their nature in their number which is 32, the single divinities who make up this *sum act each* as a 'locum tenens'  In Vāstuśāstra they are nearly unanimously identified with the divinities whose names are shown in the border of the Figure below, following the 'Brhatsamhitā, LII 43 f

VĀSTUPURUṢAMANDALA




The identification of the Naksatras with the 32 gods, who are designated as Padadevatās, divinities of whom each occupies a square of the outer border of the mandala, is made in the 'Visnudharmottara', Pt II ch XXIX 18-30  There the names of the gods are listed, four in each of the directions and four in the intermediate directions  Then follows, according to the text, the list of the "stars"  These are enumerated in groups of eight, in the four directions  Their names are almost in every instance identical to those of the Padadevatās, they are not

the names of stars, and only roughly correspond in their positions in the Vāstumandala with the presiding divinities of the stars (cf Fig on p 32 and chart on p 34)

Agni, amongst the gods, is assigned the SE, Agni, amongst the presiding divinities of the stars, is assigned the NE The latter position he holds in the Vāstumandala of the 'Brhat Samhitā' as Padadevatā (Fig on p 32) The former position however is assigned to him in most of the later texts, where Īśāna rules over the North-East [30] From this it appears that the star gods form the one, and presumably the more ancient, series in the border of the Vāstumandala, the Padadevatās are but loosely connected with the stars and their special significance is given in detail in the 'Samarānganasūtradhāra' of the early eleventh century (Part III)

The number of the Naksatras, the 'stars', is 27 or 28 The latter is the number of squares in the outer border of a Vāstumandala of 64 squares The astronomically, unsubstantiated increase of their number to 32 appears motivated in two ways It makes them identical in number and therefore in substance with the 32 Padadevatās, and this assigns to each divinity a full square in the marginal border of a Vāstumandala of 81 squares Geometrically, the mandala of 81 squares is a logical form of the proliferation of the 2, 4 and 8, directions, in a series they progress to 16, 32 and 64, in the ritual diagram of the architect, however, the 32 gods find each their unbroken place in the border of the square of 81 units whereas in the square of 64 units the squares in the corners have to be halved so that all the Padadevatās are accommodated in its border These two varieties of the Vāstupurusamandala, the one of 64, the other of 81 squares are its two main types that underlie sacred architecture

The elaboration of the Vāstumandala, the square dial of all cyclical time, and its identification with the Vāstupurusa, according to his legend, appear almost completed at the age of the 'Brhatsamhitā' and the 'Visnudharmottara' Only a few traces like the double list of the 'Visnudharmottara', or the number 32 as

[30] But for this and the corresponding changes in the intermediate directions, where Agni occupies the South-East in the place of Anila , and Anila who is Māruta who is Vāyu, the Wind, is placed in the North-Western corner, there are no major differences in the positions of the Devatās in the Vāstu of all the schools and at all times Roga (disease) in the later Vāstu-sāstra is ousted from his position and disappears from the Vāstu, while Pāpayakṣman and Śoṣa remain in the retinue of Varuna , their evil presence suffices In the inner border Rājayakṣman (consumption) is replaced by Rudrajaya, in the later texts, and Nirrti occupies the South-West corner The other divinities remain the same under identical or else alternate names or synonyms (Bhujaga, for instance, in the 'Brhat Samhitā', is Kuvera in the 'Viṣnudharmottara' and the other texts , Agni is Śikhin, Śikhā or Anala, in the Br S LII 43 and Comm )

[31] When Aryaman, east of the Brahmasthāna is replaced by Marīci, as in the 'Īsānasivagurudevapaddhati', III ch XXVII 4-7, his name appears in the South outside the Vāstu The entities stationed outside the Vāstu, who occupy positions but of no definite extent, are also mentioned in the early texts ('Brhat Samhitā', LII 82, etc ) They figure in the 'Īsānasivagurudevapaddhati', 'Samarānganasūtradhāra', etc (see Part III) and their names are added on p 32 to the Vāstumandala of the 'Brhat Samhitā', for the sake of completeness The Devatās and their identifications are given in the 'Samarānganasūtradhāra' (see Part III, where also drawings are given of the most frequent versions of the two main types of the Vāstupuruṣamaṇḍala of temples)

that of the Nakṣatras given by Utpala, commenting on the 'Bṛhat Saṃhitā', remain of the various traditions which met in the Vāstu

Utpala, commenting on 'Bṛhat Saṃhitā', LII 73, gives the position of the Stars and their presiding divinities, in the border of the Vāstumaṇḍala as follows

THE STARS AND THEIR REGENTS IN THE BORDER OF THE VĀSTU RULING OVER THE POSITIONS OF THE ENTRANCE[1]

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| E | Kṛttikā | Uttarā phalgunī | Jyeṣṭhā | Viśākhā | Punarvasu | Tiṣya | Hastā | Ārdrā |
| | 3 Agni | 12 Bhaga | 18 Indra | 16 Indra Agni | 7 Aditi | 8 Bṛhaspati | 13 Sūrya | 6 Rudra |
| S | Citrā | Viśākhā | Revatī | Mūla | Bharaṇī | Uttarāṣāḍhā | Aśvinī | Anurādhā |
| | 14 Indra | 16 Indra Agni | 27 Pūṣan | 19 Nirṛti, Rakṣasa | 2 Yama | 21 Viśvedevāḥ | 1 Aśvinī | 17 Mitra |
| W | Maghā | Prauṣṭhapada | Pūrva phalgunī | Pūrvāṣāḍhā | Viśākhā | Śatabhiṣaj | Aśvinī | Revatī |
| | 10 Pitaraḥ | 25 Ajapād | 11 Aryaman | 20 Varuṇa | 16 Śakra Agni | 24 Varuṇa | 1 Aśvinī | 27 Pūṣan |
| N | Svāti | Āśleṣā | Abhijit | Mṛgaśiras | Śravaṇa | Dhaniṣṭhā | Bharaṇī | Rohiṇī |
| | 15 Vāyu | 9 Sarpa | 7 Brahmā | 5 Soma | 22 Viṣṇu | 23 8 Vasus | 2 Yama | 7 Prajāpati |

The entrance to a building or settlement or else the position of a building on the site-plan is favourable, brings good luck to the builder, at certain of the 32 positions, and ill luck of various kinds, at others If the moon and the stars are favourable, then only should a building, on a site, or the entrance to site or building be placed in that position These astrological and other considerations are specially applicable to domestic architecture, whereas the positions and directions of temples depend on further observances (Pt VII)

The knowledge of the Vāstupuruṣamaṇḍala which implies the settling and forming (vikalpana) of the Vāstupuruṣa is the first limb of the body of Hindu

[31] The above chart shows for each of the four directions, the names of eight lunar mansions, in the first line , the numbers in the second line belong to the mansions in the sequence in which the moon enters them The third line gives the name of the presiding divinity of each Nakṣatra (star) The chart is drawn up according to Utpala, l c , and its lacunae are filled from the 'Taittirīya Saṃhitā', IV 4 10, and the 'Bṛhatpārāśarahorā'

The names of 27 Nakṣatras are given while the number of entrances or their positions is 32 Certain stars therefore are repeated, Viśākhā appears thrice, and Revatī, Bharaṇī and Aśvinī twice each

The position of the Nakṣatras does not agree with the relative situation of the principal stars, in the 'Sūrya Siddhānta' E Rohiṇī, Āśleṣā, Mūlā S Bharaṇī, Kṛttikā, Maghā, Revatī W Hastā, Dhaniṣṭhā N Aśvinī, Mṛgaśiras, Pūrva Phalgunī, Viśākhā, Pūrva Āṣāḍhā, Uttara Āṣāḍhā, Pūrva Bhādrapada, Uttara Bhādrapada Middle Puṣya (Tiṣya), Anurādhā, Jyeṣṭhā, Śravaṇā

architecture ('Samarānganasūtradhāra', XLV 2), it is a prerequisite of all architectural work, sacred and domestic

In the Vāstumandala, the eight directions of space are held by eight Vāstupurusas, over these preside the regents of the 8 planets and 8 divinities of the Naksatras Its square thus houses the daily apparent movement of the sun by which are determined the 2, 4 and 8 directions of space, it houses also the annual movement of the sun, when the points of the compass are taken to refer to the Ecliptic, and are presided over by the regents of the planets, and also the course of the moon on the Ecliptic and its passage through the lunar mansions

The regents of the planets and of the stars rule over the destinies of men The particular lunar mansions and lunar days have their presiding gods They are the powers which rule over the Naksatras and over the actions of men and their results on these days, the good or evil which they shall bring to man The house and the life of the builder or donor, are connected and their fate is determined by the stars The connection of man, his work and the cosmos, in the cycles of time is verified in the Vāstumandala of which the entire extent is covered by the one and only Vāstupurusa whose legend is told in many versions and whose body is occupied by 45 Vedic gods It is this complete Vāstupurusa congruous to his magic diagram, which forms the basis of Indian architecture Its square is symbolical of all cyclical time, the day, the month, the year and the wider cycles marked by the recurrence of eclipses

The 32 gods of the outer border, surround, and have their centre in Brahmā Along with Brahmā, their number is 33, the number of the gods in the Āpri hymns of the Rg Veda In addition to these 33 gods, 12 more gods are stationed in the square, magic diagram of the Vāstumandala, they correspond to the 12 Ādityas, the sons of Aditi Either of these series of gods are the Lords of a completed cycle of eclipses, at the end of an eclipse cycle the motions of the sun and moon are adjusted [32] Dhātar, the Creator, sets sun and moon in the same position as before (RV X 190 1-3), and the time world goes on [33]

The Vāstumandala with its border is the place in which the motions of Sun and Moon are reconciled and where their union takes place It is the Vāstu in which the decrepit, old Cyavana asked his sons, to put him down so that he would become young again Cyavana, the aged decrepit (RV I 116 10) whose story has several versions in the Brāhmanas and Purānas, though always of the same meaning, is the Moon and Sukanyā, 'the lovely maiden' whom he desires, is the Sun The 'Jaiminīya' or 'Talavakāra Brāhmana' says[34] "Cyavana, the Bhārgava knew the Brāhmana of Vāstupa He said to his sons I know the Brāhmana of Vāstupa, put me down then in the Vāstu and go forth They went forth He, left in the Vāstu, wished 'may I be young again May I

[32] R Shamasastry, 'The World-cycle', JISOA, vol XI, p 117

[33] ib p 118, The number of the Ādityas is 8 in the Rg Veda

[34] Extracts, translation revised from the original, III 120-128, W Caland, 'Das Jaiminīya Brāhmana in Auswahl', p 251 Vāstupa or Vāstoṣpati is Rudra ('Taittirīya Samhitā', III 4 10 4)

win a girl for wife May I sacrifice with a thousand cows', he saw this Sāman,[35] he praised with it, when he had praised, Śaryāta, the Mānava[36] with his clan, settled down (adhyavāsyat) by him The young cowherds smeared him with dirt he wrought discord for the Śaryātas, then neither did mother know son, nor son mother Śaryāta, the Mānava, said Have ye seen anything here which could have brought this about? They said to him surely there lies below here this worn out old man, him the young cowherds and shepherds to-day have been smearing with dirt—hence this has become thus He said That verily was Cyavana, the Bhārgava, he knows the Brāhmana of Vāstupa, him now his sons have left in the Vāstu and have gone forth Running up to him, he said Sage, homage to thee have mercy Sir, on the Śaryātas Now there was a beautiful daughter of Śaryāta, Sukanyā He said Do you give me Sukanyā! Sure I know the Brāhmana of Vāstupa, put her down here by me and then go with your clan this very day at evening,, They gave her to him Then Cyavana, the Bhārgava having praised with this chant and become young again, his youth restored by the union with the Sun, grows from crescent to full moon

The union of Sun and Moon on the new moon day is known as the cause of creation (rtu) of every form of life in the world On a new moon day, the moon enters the sun ('Jaiminīya Upanisad Brāhmana', I 13 6) The Vāstu is the site where this union takes place, and goes on taking place so long as existence (vastu) continues It is moreover not only the place of this particular union of the Sun and Moon but also of the larger cyclical celebrations which occur at recurrent eclipses

The lesser cycles of days, months and years, run their course within the Adhisamvatsara, the Great Year It is made up of 33 eclipses The same eclipse that marks the beginning of the cycle reappears at its end, when the Sun and the Moon are set together aright as before and begin their races and the Moon will gain one year over the Sun and come in conjunction with the latter at the close of the cycle Then the creation of the time world begins again and goes on in ever renewed cycles[37]

The eclipse is imaged as Rāhu His name is added to those of the seven planets, as one who ruled over a former aeon (kalpa) He is also said to be the brother of Vāstu[38] and it is his figure which is carved on the threshold of the Garbhagrha, in the Śukanāsā on the Śikhara, the superstructure, and elsewhere on the temple (Pt VIII)

All the cyclical numbers in Hindu cosmology are essentially based on the period of the precession of the equinoxes They are exact fractions of the

[35] The Sāman or chant of Cyavana causes generation, 'Tāndya Mahābrāhmana', XIII 5 12-13, it procures nourishment, etc, as it was first "seen" by Cyavana it is called the Chant of Cyavana (J B, III 128)

[36] Śarvāta is the night Mānava is a patronymic from Manu Manu Vaivasvata is the son of Vivasvān Vivasvān is Mārtānda, the Sun, the mortal form of Brahman

[37] R Shamasastry, 'Eclipse cult in the Vedas', pp 31, 39, Mysore, 1940

[38] 'Śāradātilaka', III Comm on sl 2 An aeon or kalpa is one day of Brahmā It is the period of the creation, evolution and destruction of a universe Then, in the night of Brahmā this universe is completely reabsorbed, a new universe arises at the dawn of another day of Brahmā A night or day of Brahmā has 1000 Yugas of the gods (cf note 25, Part I)

number 25920 [39] It is for this reason that the Vāstumandala of the temple, the square diagram of Existence, of time measurable in space, has two main alternative dispositions as far as it is the metaphysical and cosmological plan of the temple It is laid out in 64 or else in 81 squares, either number is a sub-multiple of 25920 which is 64 × 81 × 5 5 is the number of a Samvatsara, a cycle of 5 lunar-solar years

The form of the square is the stage on which is drawn, while it is being acted, the movement of sun and moon and that of their years in their unequal course, their meeting, reconciliation and the fresh beginning towards one more coincidence Such inequality, such imperfection are the cause of existence, the seasons similarly are brought about by the axis of the earth being inclined to the plane of its orbit The obliquity of the axis of the earth, the inequality of the motions of sun and moon, produce the cycles in which we live Were it not so, were all coincidence, life would be reabsorbed into perfection, into the infinite which is beyond manifestation

On this Vāstu dial of cosmic movement where obliquity and discrepancies appear straight and square, care must be taken not to interfere with the movements and the ways in which they are laid out, for on their courses depend the order in the universe and the destinies of human lives The science of architecture is part of the science of the luminaries, the time for setting up a building, its place and the direction it has to face are ascertained on the magic diagram of the Vāstumandala [40]

The very imperfection which is the cause of the existence of the world serves as the basis of all astrological forecasts and astronomical calculations There is always a remainder For nothing could continue if nothing were to remain The place occupied by anything in the present, is in the residue of the past The name of Vāstu, derived from Vastu, 'a really existing thing', signifies residence as well as residue (Ś B I 7 3 18-19)

The position and orientation of a temple and of any building are determined analogous to the method according to which the place of sun or moon or one of the planets is found in the circle of Naksatras According to the 'Sūryaprajñapti' the longitude of the heavenly body expressed in minutes is to be divided by 800,[41] the quotient shows the number of Naksatras through which the planet has already

[39] R Guénon, 'L'Ésotérisme de Dante', 2nd ed, p 81 25920 is the number of solar years in the Pythagorean Great year R Guénon, 'Some remarks on the Doctrine of Cosmic Cycles', JISOA, Vol V, p 21 f "The principal base of cyclical periods in the cosmical order is the astronomical period of the precession of the equinoxes, the duration of which is 25920"

The period of the precession of the equinoxes × 1000 is the number of years which must be added to 71 times the number of years contained in the 4 yugas × 14 ('Visnupurāna', I, ch III)

4,320,000,000 years is a day of Brahmā (see Part II, note 38) But a day of Brahmā is also 71 times a Mahāyuga multiplied by 14

4,320,000 × 71 × 14 = 4,294,080,000, or less than the preceding by 25,920,000 (Wilson, 'Visnupurāna', l c Vol I, p 51, note 2)

[40] See Part I, p 15 The Vāstumandala is the metaphysical plan of the temple, primarily, its cosmological and magical implications are derived from it

[41] The Ecliptic is divided into 27 or 28 Naksatras of 13°20′ or 800′ each

passed and the remainder the traversed part of the Naksatra in which it is at the time In a similar way is ascertained the position of a building in the cosmos, that is the direction which it is to face the measurement of the building is to be divided by 8 The remainder indicates the particular direction which will be its own out of the 8 directions This particular direction is the Yoni, its birthplace in the cosmos, where it is marked by its Vāstupurusa The Vāstupurusas, and the respective remainders are given by Utpala commenting on the 'Bṛhat Samhitā', Ch LII, 73, according to the teaching of other Ācāryas, and not of Varāhamihira [42]

THE EIGHT VĀSTUPURUSAS

| | NE | E | SE | S | SW | W | NW | N |
|---|---|---|---|---|---|---|---|---|
| The 8 Vāstupurusas | Rikta (Vāyasa) | Dhvaja | Dhvānksa (Dhūma) | Simha | Śvā (Kukura) | Vṛsabha | Vānara (Kapi) | Bhadra (Gaja) |
| Remainder | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Planets | Sun (Sūrya) | Moon (Soma) | Rāhu | Mars (Mangala) | Mercury (Budha) | Jupiter (Guru) | Venus (Śukra) | Saturn (Śani) |
| Nakṣatras (stars) assigned to the Vāstupurusas | Āślesā (9) | Kṛttikā (3) | Bharani (2) | Maghā (10) | Dhanisthā (23) | Rohini (4) | Phalguni (11 12) | Śravanā (22) |

If the remainder is 1, then the Yoni is Dhvaja, and the building faces East, if the remainder is 2, the Yoni is the SE, and so forth If there is no remainder the building would have to face North-East This is to be avoided by all means, it would be of evil portent were the building to face any of the corners of the square[43], similarly also the remainder should not be 2, 4, or 6, it must be uneven, so that the entrance of the building faces the East, preferably, or also the West, and less readily the North and still permissibly, the South The remainder is found in different texts by taking account of various measures of the building to be set up The perimeter for instance is multiplied by 3 and divided by 8 The remainder is that of the Yoni, should there be no remainder, the perimeter and proportions of the intended structure have to be altered [44] Death, destruction and varied ills

[42] See also 'Vasturājavallabha' The spatial symbolism of the Vāstupurusas is based on the daily movement of the sun, it is substituted by 12 Vāstupuruṣas, elsewhere

[43] The corners must be strong, no door should be there for it would admit evil influences of the spirits and ghosts which are outside the precincts of the mandala or vāstu The corners are exposed and vulnerable, they must be consolidated so that the bad influences stationed outside, cannot attack the building there and enter it

[44] Utpala's commentary, 'Brhat Samhitā', ch LII, 73 multiplies the interior length and breadth of the building and divides it by 8 The remainder is the Yoni Similarly, 'Vāsturājavallabha', ch III 8 In other texts, the height of the temple is taken into account ('Vaikhānasāgama', ch VI) while the 'Tantra Samuccaya', Part I, ch II 3, considers the perimeter, and the 'Mānasāra', ch IX 68 74, the breadth of the building Perimeter or breadth are multiplied by 3, this indicates an area equalling that of a circle with the breadth or the perimeter of the building as its diameter 3 (instead of $\sqrt{10}$) is employed in the 'Mahābhārata', Bhūmiparva and Bhīṣmaparva, where the circumferences of the planets are stated in numbers which are the 3 fold of the numbers expressing the diameters

result from a wrong orientation. If the building were to obstruct the course and order of the cosmos it would provoke disorder in the kingdom, and in the body of the builder. Yoni is an architectural formula; the remainder, gained through it, assures the fitness of the structure in the order of things and the well-being of the builder and his surroundings.[45] The remainder, particularly, is however, the Vāstu itself.

The drawing of the square plan, of the Vāstupuruṣamaṇḍala, is imperative prior to building a temple. The knowledge of its meaning and execution is the first discipline which the architect must master; there is no text on Indian architecture which does not deal with it or takes its knowledge for granted. At the height of temple building activity, when some of the noblest and largest Prāsādas were set up about the year 1000 A.D., the actual drawing of the diagram on the ground which the temple (prāsāda) was to occupy seems to have been the rule. From the stretching of the cord, or the drawing of the lines of the maṇḍala, every one of the movements is a rite and sustains, in its own sphere of effectiveness, the sacred building, to the same extent as the actual foundation supports its weight. These movements, rites and meanings are not accessory nor are they a mere accompaniment to the building itself. They go into the making of the Hindu temple, its shape and proportion and that of every carved detail and every figure, each at its proper place, with the rhythms and gestures, appropriate to it.

[45] The Yoni formula is but one of six formulae, the Āyādi Ṣaḍvarga, in which the remainder determines the gain or loss which will accrue to the builder, the Nakṣatra (ṛkṣa), the lunar day (tithi) and the solar day (vāra) on which it is good to build that particular building. These formulae belong to astrology in general; they are applied to the building as though it is a living entity whose destiny is to be determined. It is however only their cumulative bad effect which makes any perimeter inauspicious once the Yoni formula is satisfied. (V. K. R. Menon, '6 Canons of Indian Architecture', 'Bulletin of the Sri Rama Varma Research Institute', 1934, pp. 67-77.) The formulae are not 'canons'. See 'Mānasāra', XXX. 168-194, etc. and P. K. Acharya, 'A Dictionary of Hindu Architecture', pp. 600-611.

The Yoni and the other five formulae are considered when no other, definite injunction is given where the temple of a specified divinity has to face, etc. (see Part VII). The power of the specific divinity and its appropriate orientation outweigh the Āyādiṣaḍvarga.

## SYMBOLISM OF THE SQUARE

### THE ENCLOSURE

The angles of the square diagram lie in the intermediate directions. They are the turning points and require to be marked. There the pegs are driven into the ground and the cord is stretched between them to fence off the square. A line following the cord should be drawn with a golden or silver style or with curd or with pounded, unhusked rice (I P III ch XXVI, 89). Thus is the site taken possession of, on all sides. It is closed and is given its measure. "Let him fence all quarters so that no obstructions proceed from them" says the 'Mahānirvāṇa Tantra,' (V 92), about the Digbandhana, the ritual gesture, the enclosing of a certain space by movements of hands and fingers which is analogous to the initial architectural procedure. That a certain site is delimited, that this site is bordered by the orients of this visible universe, and that its measure is derived from, and demarcates, the movement of the universe, all this is drawn on the ground with the golden style which follows the cord stretched between the four pegs at the corners. This is the preparation of the 'temple'.[46] It is in continuity of the rites around the Fire altar. "He draws lines around it. He thereby puts a measure to it" (Ś B VI 3 3 23—24)

### THE ORNAMENT OF VIŚVAKARMAN

Of all architectural forms in India the square is the leading symbol. The 'Bṛhat Saṃhitā' recounts how Viśvakarman, the archetypal architect[47] gave the first ornament to the banner of Indra. The banner of Indra, the King of the gods, was produced from Viṣṇu-Nārāyaṇa's lustre. It was carried on the eight wheeled fulgent chariot of the Sun.[48] The flag of the chariot of the Sun is Dharma, the Order of things in the universe. The gods presented this banner with various ornaments. The ornament given by Viśvakarman was of square shape, and its circumference was a third of the extension of the banner. Brahmā and Śiva made the second gift, a vary-coloured girdle, the cycle of the years and of time. It was

[46] 'Templum' with the Romans, from where the name temple is derived, was the square plot whence auguries were watched and interpreted by the 'contemplating' priests.

[47] Viśvakarman is Prajāpati (Ś B) as the universal constructive principle. He is called Viśvakarman because he created the activity of everything ('Bṛhad Devatā', II 50). His name and function lend themselves to many and more or less specialised applications, see R Guénon 'L'Homme et son Devenir selon le Vedânta', p 58, note.

[48] The eight wheeled chariot is the day, divided into eight 'yāmas' of three hours. 'Br Saṃh', XLII 6 Commentary. In the 'Viṣṇupurāṇa', II VIII 4, the body of the chariot is the year and Dharma its flag, also in the 'Matsya, Vāyu' and 'Bhaviṣya Purāṇas'.

by one eighth part smaller than the square and each successive gift from the other gods was yet smaller by one eighth part By raising that standard, the King of the gods annihilated in battle the host of the enemy, the children of darkness The 'Bṛhat Saṃhitā' (XLII 68) then says "A prince who respects this institution, first established by Vasu,[49] the sky-traveller, and always since observed by other rulers, may feel certain that no danger from enemies shall befall him"[50] for this banner is that of royal Righteousness (rājadharma)

The square symbol of the extended world in its order has precedence over the circle of time, the second ornament Of the two, the first ornament, the square, is the larger, the comprehensive form, for it contains the cycles of measurable time

There were no children of darkness prior to the raising of the standard when manifestation was not yet and the eight-wheeled effulgent chariot had not radiated the lustre which it was to carry through all time When it began its journey, the children of darkness arose so that against them its lustre became apparent They are its natural setting, complement and antagonists Now the banner is radiant but is as yet without the ornaments of form and these the gods forthwith present The square, first of all ornaments, is the perfect form, the perfection of order Its identity is established by the pairs of opposites by which it is encompassed By raising such a banner the host of the enemy is vanquished in disorder It is as potent a weapon as Indra's Vajra, the thunderbolt, which also is square (RV IV 22 2)[51] Elsewhere ('Agnipurāṇa', ch CCCV 14), while enumerating the abodes of the different divinities, it is said that in the quadrangle (catvara) Śiva is present[52]

Time in its course, beginning, enduring, passing in cyclical continuity, is the vary-coloured zone of creation duration destruction affixed to the banner of Indra The circle of time, in the hierarchy of form comes after the square and is enclosed in it in the Vāstumaṇḍala Both these symbols are ornaments of Dharma, the Order of things in the cosmos and the world of man This is exemplified with regard to Sacerdotium and Regnum, spiritual and temporal power The golden handle of the fly-whisk and sunshade is square for priests, Brāhmaṇas, and circular for kings ('Agnipurāṇa', ch CCXLV 2)[53]

The method of producing the square, adopted in Vāstu-śāstra is that of Baudhāyana (p 22) According to this method, the construction of the square

[49] Vasu, the 8 Vasus, and Vāstu are all derived from the same root See Part III, notes 59, 65 and 72

[50] In the residence of a king, the Indradhvaja is hoisted in the central square, the place of Brahmā, which must not be encroached upon by any building ('Samarāṅganasūtradhāra', XV 47-48)

[51] With this four cornered Vajra Indra slays Vṛtra

[52] Catvara is the levelled (square) ground prepared for a sacrifice This does not imply that the ground-plans of Śiva temples are square in every instance Śiva temples are square and also circular

[53] In domestic architecture too, the buildings for Brāhmaṇas are square or nearly square, if rectangular, the length exceeds the width by 1/10 only In the buildings of Kṣatriyas the excess is ⅛th , in those of Vaiśyas and Śūdras, ⅙th and ¼th respectively (S S XIX 18-19, Br S LII 13) The lower the caste the further remote from the perfection of the square are the buildings which are suitable for its members

presupposes circles The circle is a dynamic form It is full of tension and perpetual movement for it is set into motion and acquires form from the point in the centre In its form is its origin, the point Ontologically it is dependent on the mover

Brahmā, the Creator, and Śiva, the Destroyer, give the girdle of time as their joint present to the banner of Indra, which is Dharma The circular shape of the girdle is also that of the Cakra, the wheel, a treasure of a Cakravartin[54] or world-ruler, and as Dharmacakra or principial wheel, a symbol of the Buddha[55] The wheel, cosmic order in its function, the Dharmacakra, keeps on rolling Cosmic order is ruled over by its king, the Dharmarāja His residence, which is its place of abode and fulfilment is described as four angled or square and with four gates ('Garudapurāna', XIV 5) Dharmarāja, is Yama, Death, who rules over the earth and has given to men a residence on earth

The square is the archetype and pattern of order[56] In Indian tradition accordingly, the world follows it in its geological and social structure Mount Meru rises from a square base Each of the four castes is assigned to one of the four sides of Mount Meru[57] For this reason too, the four castes are made to live in towns or villages in the north, east, south and west respectively ('Bṛhat-Samhitā', LII, 67-68)[58]

Related in its proportion to the square is also the perfect measure of man for it is 'as high as broad' This is the canon of his accomplished figure From the root of the hair on the forehead to the soles of his feet, his length is equal to the width of his arms stretched out horizontally, from the tip of the middle finger of the right to the tip of the middle finger of the left This is the standard of his proportion[59] In this, the figure of man in its perfection is identical to that of the

[54] 'Mahāsudassana Suttānta' (S B E XI, S B B III), 'Lakkhana Suttānta' (S B B IV)

[55] Barhut, Coomaraswamy, 'Elements of Buddhist Iconography', Pl V It is carved on the pedestal of images of the Buddha preaching his first sermon (Sārnāth image, Coomaraswamy, HIIA, Pl XLII), preaching to Bodhisattvas, 'Elements of Buddhist Iconography', *op cit* Pl VII

[56] R Guénon, 'Le Roi du Monde', "In the figure of the celestial Jerusalem the circle is replaced by a square The sphere represents the development of possibilities by expansion of the primordial and central point It transforms into a cube, when this development is achieved and the final equilibrium is attained in that cycle"

The vision of Ezekiel (41, 1) describes the Tabernacle as 6 cubits square The brazen altar in the Tabernacle in the wilderness (Exod 27 1) and the oracle in the temple of Solomon (I Kings, 6 20) are square in plan The oracle in the Temple, and the heavenly city of the Apocalypse are cubes

[57] Al-Biruni, 'India', ch XXIII, p 243, quoting Brahmagupta Each side also has its appropriate colour The East [Brāhmanas] white, the North [Ksatriyas] red, the South [Vaisyas] yellow, the West [Śūdras] black Meru, the cosmic mountain, is a symbol of the axis around which the revolutions of our world are effected R Guénon, 'Some Remarks on the Doctrine of Cosmic Cycles', JISOA, Vol V, p 21

[58] The positions of the Brāhmanas and Ksatriyas are reversed and similarly also the application of the 64 and 81 plan, in some of the texts Varāhamihira, in ch LII 42-55, gives ascendency to the 81 squares plan, and also to the Ksatriyas in their allocation in the East

[59] 'Bṛhat-Samhitā', LXVIII states that the 5 types of man, Hamsa, Śaśa, Rucaka, Bhadra and Mālavya conform to this ideal proportion irrespective of the standard height laid down for each type

Mahāpurusa, Supernal man, the Universal Being [60] This measure of a fathom is also that of the square space in whose centre the Āhavanīya fire burnt and where the circular Gārhapatya equal in area to a fathom square had been piled up afterwards "A fathom (vyāma) that namely is the size of a man and the altar should be of man's size" (Ś B I 2 5 14) [61] This square altar of a fathom length is the middle term between man (purusa) who is the sacrificer and the Purusa In the Brāhmanas, Prajāpati, the lord of all creatures, takes the place of the Purusa "That same Purusa became Prajāpati and that Purusa who became Prajāpati is this very Agni (Fire altar, Ś B VI 1 1 5)

Based on the square, the structure of the temple arises in the mid-world (antariksa) of air It is built in three dimensions, of different substances, brick, or wood or stone They are cut or moulded to this purpose If injury be incurred thereby he makes it good, but the living connection is severed and a transubstantiation is effected by which earth, tree and stone are made to enter the Kingdom of the Dharmarāja

The Hindu temple is in no way derived from sepulchral architecture As the Śmasānaciti is an altar specially used for funerary rites, so are the Chatris for instance, cenotaphs set up by Rājput rulers to commemorate their predecessors, related to types of temples which are represented in relief in Barhut, about 100 B C The Chatris, from the 17th century to this day are open, pillared buildings

Measure implies limits and limits mean end and death It is by man's own, mortal frame that this knowledge of the structure of the universe is confirmed The square, form of finality, is at the same time that of the pairs of opposites, manifestation is only through the pairs of contraries[62] and in their balance lies the perfection of the square Its proportion embodies, and thus resolves, the finality of limitation into a symbol of perfection Proportion and balance are the form of the subtle (sūksma) nature of the square, their residue is the order which belongs to the city of the Dharmarāja, who is Death and a son of the Sun [63] The other son is Manu, the prototype of man who gives its law to each cycle of existence

[60] The Buddha as an embodiment of the Mahāpuruṣa has this perfect proportion , Kramrisch, 'Emblems of the Universal Being', JISOA, vol III, pp 148 f

[61] cf Āp Ś S XVI 17 10 , and 15 where it is laid down that also "the Agni piled up for the first time should measure one square puruṣa"

[62] The square throne of divinity rests on the following pairs of contraries Order and its negation (dharma and adharma) , Knowledge and ignorance (jñāna and ajñāna) , Dispassion and its opposite (vairāgya and avairāgya), and sovereignty and its negation (aisvarya and anaisvarya) The positive values support the throne, as its legs, in the corners, in the intermediate directions Their negations are situated at the shafts, in the cardinal directions 'Īśānasivagurudeva-paddhati', Part III ch XII 25 (trans JISOA Vol X p 227)

[63] Similarly, the finality of architectural form houses the life of man and is a seat of the living God

## THE REMAINDER

### THE FORM OF MĀRTĀNDA

At sunrise another day begins, and time is added to time.[64] There was a yesterday where no sun shone and time did not exist, there was neither beginning nor end to anything so there was no thing, no limit. The non-limited, beyond limits, beyond the conditions which bring about the limits is Brahman. Being beyond all conditions, Brahman is all and everywhere and necessarily also in those conditions. So they too are within Brahman. Thus it is said "there are two forms of Brahman, time and non-time ('Maitrāyanī Upanisad', VI. 15). The one is deathless, the other is mortal, the mortal form of Brahman is the Sun. This Sun, whose children are men, is called Mārtānda.[65]

Mārtānda is the eighth son of Aditi, him the Boundless (=Aditi) brought forth inarticulate, a lump of bodily matter, as broad as it was high. Some however say that he was the size of a man (Ś.B. III. 1. 3. 3).

The shape of Mārtānda is the result of Aditi's hybris. The 'Maitrāyanīya Samhitā' (I. 6. 12) tells the story. Aditi, wishing to get children, cooked rice. She offered it to the gods and ate the remnant. The result was that two sons were born of her. Again, she cooked rice, offered it to the gods and ate the remnant. Two more sons were born of her. She repeated the performance and again the result was the same. In consequence she concluded that she bore each time two sons because she had eaten the remnant of her offering. So she was tempted to eat first and then to offer the remnant. The result was that the two eggs within her were blighted. One recovered, the other appeared as dead and when born was Mārtānda.[66]

Leaving aside the many implications of this story, the Sun Mārtānda, the son of Aditi, born of the unconsecrated remainder, is the father of Man and of Death (Manu and Yama). Each of the other seven sons too, is born of the 'remainder'. From the Remainder, Aditi, the Boundless, brings forth the Sun in its various forms, the measure of time, the condition of mortal life.

[64] Time in its cyclical appearance is manifested by the sun, moon and planets. It is the contingent aspect of duration. Duration is beyond division, it has no parts. Yet it is different from the unconditioned, unqualified Brahman (nirguna) of which it is the first qualified aspect. The unconditioned, unqualified Brahman is beyond duration and time. Duration is the principle of time and of death. The Sun (Mārtānda) is the Father of Death, and of Prototypal man, Manu, the Law-giver of each cycle (Manvantara, 4,320,000 years [This is 10 × 432,000, the number of syllables of the Rg Veda]). Duration as the principle of cyclical time is Śiva Bhairava or Kāla Mahākāla (see ch. on Rāhu, Pt. VIII).

[65] RV. X. 72. 8, 'Maitrāyanīya-Samhitā', I. 6. 12. The egg which appeared as dead, "Mārtānda".

[66] The eight sons of Aditi (RV. X. 72. 8) are the eight Ādityas, the seven and one suns, Mitra and Varuna, Dhātā and Aryaman, Amsa and Bhaga, Indra and Mārtānda are their

## VĀSTU, THE REMAINDER

The shape of Mārtānda which is that of the Sun as father of Man and of Death,—the shape of the remainder, born from the boundless, is "as broad as it is long" Of this shape the diagram is a square Its eight main points situated at the corners and the middle of each side, at the cardinal and intermediate directions, are occupied and identical to the 8 Vāstupurusas, who themselves are but 'remainder' in each particular instance (p 38) Altogether, as its name implies, Vāstu is the remainder

The remainder or residue is that which remains or subsists when everything else has come to a conclusion If something is complete in itself, perfection, nothing is left over, there is an end of it If there is a remainder there is no end to it So the remainder is the germ and material cause for what subsists It is the concrete reality of a thing

The residue of the sacrifice is called Vāstu (Ś B I 7 3 18-19)[67] What has been left over, should not be added later on For it is left over for Rudra ('Maitrāyanīya Samhitā', I 5 13) A hymn of the Atharva Veda is sung in praise of the Residue of the offering "Name and Form are in the Residue The world is in the Residue Indra and Agni are in the Residue The Universe is in the Residue Heaven and Earth, all Existence is in the Residue" (AV XI 9 1-2 a) This residue where all existence is set together, is Vāstu Rudra is called Vāstavya, for a remainder (vāstu) is that part of the sacrifice (Ś B I 7 3 7) And the 'Taittirīya-Samhitā', III 4 10 4, says Vāstospati (the lord of the Vāstu or remainder) is Rudra

Rudra is Vāstospati Vāstospati is but another name for Vāstupurusa, the Purusa who is Vāstu The Vāstu, in which reside (vas) the gods, is the residue, and the place of the germ of things to be and of the order of the extended, the plan, in principle, of the temple Before dealing with the Vāstu as Purusa (Supernal Man) the Vāstu as mandala (diagram) has to be explained in its parts and range, so that the whole Vāstupurusamandala becomes clear in meaning and application[68]

names in the 'Maitrāyanīya Samhitā', I Here the remnant is of food By eating some kind of food children are born to the immortals, or by inhaling some scent, or by mere touch

Cosmogonically, the Sun is produced from the Boundless and the Remainder Ontologically, the Remainder, Vāstu, Existence in its cosmic order, is the diagram where the Sun and the other Luminaries are shown in their respective places

[67] The passage can equally be rendered "The site of the sacrifice is Vāstu" , for when the sacrifice is completed, and all is burnt up or consumed, what remains of it is but the site where the offering took place This site is the Vāstupuruṣa just as the sacrificial altar is the Puruṣa

[68] The Vāstupuruṣamaṇḍala is discussed here, as everything else concerning the Hindu temple in three of its aspects , metaphysically (parā), in its subtle aspect (sūkṣma), and descriptively (sthūla), in its physical aspect, its delineation

## THE TWO MAIN TYPES OF THE VĀSTU DIAGRAM

### A THE MANDALA OF 64 SQUARES

The 'Bṛhat Saṃhitā' speaks of two types of diagrams, one consisting of 64 equal squares (pada) and the other of 81 squares In chapter LV 10, it is enjoined that the area of the temple should always be divided into 64 squares [69] Similarly, the 'Hayaśīrsapañcarātra' (VIII 150) lays down that the diagram of 64 squares is for the construction of shrines, and a diagram of 81 squares for the construction of houses The 'Īśānaśivagurudevapaddhati' (Pt I XI 7 and Pt III XXVII 2) makes it clear that a Vāstu of 64 squares is for worship by Brāhmanas, and one of 81 squares for worship by kings [70] These views are not quite the same, but it is obvious that the Vāstu of 64 squares is meant for the construction of shrines and for worship by Brāhmanas and the Vāstu of 81 squares is for the construction of other buildings and for worship on behalf of kings (Ksatriyas), or that the diagram of 64 squares and also of 81 squares are fit for temples, but the first is for worship by Brāhmanas, the sacerdotal power, and the second for worship on behalf of the temporal power (Ksatra) [71]

The special sacredness of the mandala of 64 squares is stressed in other texts the 'Vāstuvidhāna' (IX 2 ) enjoins that the pedestal (pītha) or hearth (dhisnya) for the worship of Vāstu (vāstupūjā) should have 64 squares, while in ch X 1-6 (ibid ) it is stated that the Vāstumandala in which is situated the body of the Vāstupurusa should consist of 81 squares This is corroborated, for instance, in the 'Prayogapārijāta' (chapter Vāstu-homa, 1-3, p 94) There the Vāstu of 64 squares is prescribed for the rites of initiation (dīksā), the installation of images, (pratisthā) and for sacrificial offerings (yāga) whereas it is said that the mandala of Vāstu has 81 squares

There is a difference in meaning and purpose, on one basis in common between the two main types of the Vāstupurusa-mandala The prototype is the one of 64 squares The mandala of 81 squares is drawn in closer conformity with

[69] The 'Bṛhat-Saṃhitā', LII 73, commentary, points out an exception to the rules of ancient Ācāryas Visvakarman has not explicitly spoken of the mandala of 64 squares (he includes it in that of 81 squares , in the opinion of Utpala)

[70] Also 'Matsya Purāna', ch CCLIII, 47 "Brahmā has enjoined the mandala of 64 squares for Prāsādas" , 'Bhavisya Purāna', ch CXXX 17 "The place of the temple should be divided into 64 squares" 'Agnipurāna', ch XCIII 1 "After having laid down the cords for the Prāsāda make the Vāstumandala (the text has 'Vāstumandapa') of 64 squares In house and city (nagara) one should worship in 81 squares" 'Śāradātilaka', III 7, comm (*a*) 64 squares for the Prāsāda , (*b*) 81 for a house, quoting (*a*) Somasambhu, (*b*) 'Mahākapila-pañcarātra' , nevertheless the 'Matsya Purāna' describes in the first place the Vāstupuruṣa-mandala of 81 squares (ch CCLIII 19 , ch CCLXVIII) , also the 'Bṛhat Saṃhitā', LII 42-55

[71] Four factors (1) temple, (2) non-temple, and (3) Brāhmanas and (4) Kings Kṣatriyas are referred to in this passage, crosswise , its meaning is unmistakable

the 'body' of the Vāstupurusa, and appears to have been used by Ksatriyas in contradistinction to the cosmic plan of 64 squares At the time of the construction of the temples which yet stand and of the treatises about them, this distinction, though still known, was not necessarily also made Varāhamihira, in the sixth century, speaks of either type, specifies the use of the mandala of 64 squares and gives major importance by describing it in detail, to the mandala of 81 squares At the climax of the temple building activity (about 900-1100 A D ), the 'Īśānasivagurudeva-paddhati', after having clearly distinguished between the two plans decides If of 81 squares, it is fit for Prāsādas, and kings too (III ch XXVII 3), and concludes by prescribing that 81 squares are drawn on the square floor of the Prāsāda to be built (ib 58-60) The 'Kāmikāgama' (XVII 107), after discerning the types sums up its position "In this text-book (sāstra) it is said that everything is fit for all" While this was held at the time when the temples were actually built, the implied difference of meaning on its common basis requires to be investigated in the two main types of mandalas which are relevant to the temple

Altogether 32 types of mandalas are given according to which all works of architecture are planned or regulated These mandalas form an arithmetic progressive series from 1 to 32, the respective numbers indicate the units into which the side of the square mandala is divided in each case The series of mandalas corresponds to the geometrical method of gnomonic extension In the Sārārathacakracit (p 27), a square of 4 bricks is made in the centre of the sacrificial site (agniksetra) By gnomonic extension, the square is increased to one of nine bricks by adding five, this is increased to one of 16, etc The bricks themselves are square, each measuring one foot (pada) generally (Ś B VIII 7 2 17) So there are 8 bricks or squares facing each direction, in a square of 64 equal parts

The numbers 8 and 16 which form part of and produce the square of 64 Padas, refer to the Sun and Moon During the 8 Praharas of the day, from sunrise to sunrise the sun enters one by one the 8 quarters ('Viśvakarmavidyāprakāśa', 126) [72] Thus it can be said there are 8 suns The 16 digits (kalā) of the moon represent the sum total of its phases 16, the square of 4, is the perfect number and is embedded in the mandala of 64 squares But the square of 8 units has the wider significance

Ayodhyā, the impregnable city of the gods, has eight Cakras (cycles, AV X 2 31 'Taittirīya Āranyaka', I 27 2-3) "The city of Ayodhyā" is of two

[72] See Part II, note 48, quoting 'Brhat Samhitā' (the 8 yāmas of the day)

[73] The Cakras of the microcosm are Mūlādhāra, the support of all the Cakras , Manipūra, the seat of mind (manas) , Svādhiṣṭhāna, the seat of intellect (buddhi) , Anāhata, the seat of the principle of articulate sound (Śabda brahman) , Visuddhi, the seat of Ether (ākāsa) which is the substratum of the quality (guna) sound , Ājñā, the seat of knowledge (bodhana) , and Sahasrāra or Śiva-Śakti or Bindu, the point limit between the unmanifest and the manifest 'Vācaspatya', s v

The eight Cakras are also given as the eight means necessary to control the inclinations of the inner faculties They are Yama, restriction, Niyama, observances, Āsana, sitting posture, Prānāyāma, breath control, Pratyāhāra, emptying the mind from external objects, Dhārana, its subsequent concentration, Dhyāna, keeping it concentrated and Samādhi, merging and dissolving it in the object of its concentration ('Tantrarāja-Tantra', XXVII 54-55)

## B THE MANDALA OF 81 SQUARES AND THE VĀSTUPURUṢA

The square of 64 or 81 divisions is occupied by the Vāstupurusa It is his very shape (svarūpa) The square of 81 compartments as explained in the 'Vāstuvidhāna' (X 1-6) is occupied by a picture of the Vāstupurusa His subtle body with its parts, limbs and apertures is interpreted as co-terminous and thus one with the 81 squares of the plan The coincidence (ib VIII 26, 31) of the diagram (yantra = mandala) and of the 'body' (śarīra) of the Vāstupurusa as one form (rūpa) is more suggestively laid out in the Paramasāyika than in the Mandūka plan

The identification of the 'body' of the Vāstupurusa which has expansiveness but no tangible volume with the plan of the Vāstumandala is an accomplished fact, in the Purānas and in Vāstuśāstra The mandala or yantra on the one hand, the subtle body of man on the other, have each their own place in the Indian methods of concentration and realisation The mandala, in addition, is replete with magical efficacy, while the subtle body of man is the place of realisation by the practice of the discipline of Yoga The Vāstumandala as tabular presentation of the hierarchy of ordered existence is complete without the image of the Vāstupurusa The Paramaśāyika plan, however, neatly identifies the Vāstumandala and the Vāstupurusa [80]

The tabular representation (prastara-mārga) in 81 squares accommodates the 32 divinities of the border (p 32) in entire compartments and avoids the halves of squares in which some of these, and also of the other gods, have to be confined in order to find room in the Mandūka mandala The fractionless allocation of the Vedic gods on the 'body' of the Vāstupurusa is effected in the square of 81 compartments The 'descent' of the Vāstupurusa to earth, and the settlement of the gods on this Purusa, one with him on earth, is represented in the square of 81 parts [81]

While the square of 8 represents the order of the celestial world, established and illustrated on earth, by the drawing of the yantra of 64 squares, the square of 9 leads from the subtle body of the microcosm[82] and its image to the universe, which it encloses Eight are the Cakras and nine the doors (navadvāra) of Ayodhyā, the microcosm They are the mind (manas), intellect (buddhi) and the 7 apertures of the body Nine is the number of Agni, of Fire in its display, and in its essence,[83] for eight are the forms of Agni and the ninth is the Fiery essence which has

[80] Some of the series of 32 maṇḍalas are altogether without the Vāstupuruṣa Moreover, assigned to their concentric borders are not the 45 Vedic gods, but in the zones surrounding Brahmā, the gods, men and the demons respectively are allocated

[81] His legend and its meaning are given in part III

[82] The term microcosm is used here with reference to the 'body', not of man from whom the image is taken, but of the Vāstupurusa

[83] Ś B VI 1 3 18 Eight forms of Agni, Kumāra (the boy) is the ninth That is Agni's three fold state

The 8 forms of Agni are Śarva, Īśāna, Parjanya, Rudra, Pasupati, Ugra, Asani, Mahādeva, the 'Fire' in water, Sun, rain, etc

Ś B VI 2 1 1 "Prajāpati searched for that boy who had entered into the different manifestations"

## THE ORGANISM OF THE PLAN

The size of the Vāstupurusamandala is of no matter It is coterminous with the building site, or with the extent of the Prāsāda or of a minimum standard size In it are laid out the positions of the several buildings to be set up on the site and also the positions of the buttresses of the temple (Part VII) The lines by which the square plan is divided into small squares, the two diagonals of the plan and the "lesser diagonals", 4 or 8 in number, and drawn parallel to the former have a definite width, proportionate to the size of the plan The width of the *main diagonals in a plan of 81 squares measures as many finger breadths* (angula) as the side length of the small square measures in cubits (hasta, Br S, LII 62-63), and the straight lines have one and a half times this width Their *intersection (marma, a vital, or vulnerable spot) measures one eighth part of one* square in the plan of 81 squares [87] The division of the square and also the divisional lines themselves are measured in proportion to its total extent No building, or part of the temple must be placed on these vital points

The archetypal measure (māna) of the line (sūtra) is known as Prāna, immanent Breath or Energy (pneuma) [88] By it is measured the width of the outline of one square in an 'ardha-ksetra' (half field) of 360 squares ('Kāmikāgama', XVIII 8) This half field of 360 units is part of a wider extent The whole field has 720 units (8 × 9 × 10), or, if 360 is multipled by 72, or 9 × 8, which are the side lengths of the two types of the Vāstupurusamandala, the number 25920 results which is the number of years in the period of the precession of the equinoxes From Ayodhyā, the impregnable stronghold (pur) of the gods, with its 8 Cakras and 9 doors, the whole field of 720 days and nights of the year is extended which is one of the units of cyclical time in the Vāstumandala

Prāna, the breath of life, immanent Breath, in man, the microcosm, is one in principle with Brahman (Śankarācārya, comm 'Brahma Sūtra', III 2 7) In deep sleep (susupti) all the faculties of knowledge, sensation and action are withdrawn in Prāna Prāna governs and is manifest in the vital functions of breathing, etc, which are called Vāyu, vital activity In the 'Kāmikāgama' the lines (sūtra) are measured in terms of Prāna and Vāyu as archetypal measures The Breath of life, immanent Breath, in the functions of breathing, etc, is the network that holds together the 'body' of the Vāstumandala In its duration it lies extended

The immanent breaths (prāna) are the immortal parts of the body (Ś B X 1 4 1) With them, drawn in a network of lines, the body of the Vāstupurusa lasts as long as the present aeon (kalpa) The lines are not mere geometrical

[87] The Marmas are of special importance in the site-plan Where the Vāstumandala is co extensive with the Prāsāda they affect the position of pillars in temples as described in the 'Samarānganasūtradhara', ch XLIX In brick and stone temples such as are preserved the Marmas affect the positions of windows, buttresses, etc of the wall of the Prāsāda

[88] Prāna is also the smallest unit of concrete (mūrta) time, it is the time needed for inspiration and expiration

connections, their prototype has the measure of Breath, they have direction and width, while they form a net cast over the plot, they also share in its extent, represent it in an aliquot ratio and their points of intersection are the vital parts and tender spots (marma) of the site These must not be hurt or interfered with by setting up pillars, doors, or walls, on them

The identification of this body built of Breath which is coterminous with the Vāstumandala, with that of the builder who is the Yajamāna and patron, and with the plot, is no abstract theory It is felt in the living tissue of the body of the donor who is the builder (kāraka) of the temple ('Samarānganasūtradhāra', LVI 303) Were the organism of the ordered plot brought out of order and disturbed in its interknit functioning as plan and symbol, the builder would suffer in the corresponding parts of his body and earthly life, death will befall him should he obstruct by building on them, the main vital parts of the plan, its head, heart and so on, and minor evils will be his if he disregards the lesser junctions and lines Builder and building are one, the building is a test of the health and probity of the builder, his 'alter ego', his second body, if the building be a sacred one, a temple, this second body is his sacrificial body born from a second birth, the conscious sowing of seed, into a prepared soil and the depositing of the Seed of the building to be which is the germ of the Purusa, the Essence that dwells in the body of the temple This new birth and transubstantiation has for its level the surface within the limits of the mandala

The places which must not be encroached upon by doors, walls or pillars, beams, etc and windows (gavāksa, vātāyana, Br S Comm, LII 57, 'Samarānganasūtradhāra', XIII 10-16), at the concurrence of the lines (sūtra) are listed on p 55 [89] They are avoided by shifting for example the position of the

[89] The 'Brhat Samhitā' enumerates 9 specially vulnerable spots (atimarma) and gives the proportionate size of the tender spots (marma) These are grouped according to their importance and specified in the later texts according to the lines which meet, diagonals and orthogonals, and their number, at each respective crossing The size of a vulnerable spot is given in the 'Brhat Samhitā' as ⅛th of a square (the whole plot being divided into 81 squares) The 'Samarānganasūtradhāra' however gives to the conjunction of 8 vamsas (=8 sūtras, at their meeting point) the extent of the tip of a hair (bālāgra), that is, the concurrence is just a point The ⅛th of a small square of the 'Brhat Samhitā' does not correspond to the actual extent of 'marma', it appears more as a parcelled plot with the concurrence of the lines in its centre and agreed upon to be ⅛th of that of the small square In the 'Samarānganasūtradhāra', the 'sandhi' or conjunction of lines has no magnitude It is a point to be avoided when determining the position of the middle of door openings, pillars, etc According to the 'Kāmikāgama,' XVIII, 9, Prāna and Vāyu are the prototypes of measurement of the width of the Sūtras The Mahāvamsa has twice the width of the Anuvamsa, etc The archetypal measure, Prāna, is one breath—duration The standards of extension are its modifications In a field of 3 cubits, the line (sūtra) measures one barley corn (yava), with an increase of the field by one cubit, the lines should be thicker by one Roma (hair, ib 18-19) The relative size of a Marma in this text too, has the eighth part of a 'pāda'

The measures generally used in Vāstu-Śāstra are 1 Bālāgra [or Roma], tip of hair=8 Ratharenu (trasarenu), mote of dust in a sun beam [1 Trasarenu=8 Paramānu, visible only to Yogins], 8 Bālāgras=1 Likṣa, nit, 8 Likṣas=1 Yuka (louse), 8 Yukas=1 Yava (barley corn), 8 Yavas=1 angula, 12 angulas=1 vitasti (span), 2 vitastis=1 hasta (cubit)=1 kiṣku, further units of measurement, increased by one angula each time (Prājāpatya, Dhanurmuṣṭi, Dhanugraha, etc) are used for measuring temples (vimāna), sites (vāstu) and villages, etc, but 'hasta' or 'kiṣku' is the most generally used unit of measurements in objects of larger

respective parts of the building, to the right of the vulnerable points [90] Similarly also nothing (no 'dravya') may be placed on the border or middle lines and the consequences are serious too, though not fatal, if the other orthogonals and the 2 diagonals are infringed (ib XII 23-36) [91] The earlier texts however limit the tender spots to the concurrences of lines (Br S LII 57, 'Visnudharmottara', Pt II, ch XXIX 45-46)[92] The spots which are the most vulnerable and which must be avoided with great care, are in and around the Brahmasthāna, the centre of the square

The connections of the Vāstupurusamandala and the buildings to be set up on it are manifold They comprise the position of temples sacred to distinct divinities,[93] of definite buildings in definite parts of the mandala and the position of the images at their definite places In addition to these iconographic considerations, the slight deviation of doors, pillars, etc from a uniform and mechanical symmetry contributes, as in the forms of life, towards a fuller consonance, of the proportions of the architecture The living breath of Vāstupurusa would thus be seen to permeate the total structure

size, from bedsteads and conveyances upward ('Vāstuvidyā', 1 4-10), re the various types of angulas, see the 'Kāmikāgama', XVI 2-9, I P III ch XXIV 31

Apart from the various kinds of angula, the scale of measures is further differentiated 8 yavas make the chief or 'best' (jyeṣṭha) angula, while the middle variety of the angula has 7 yavas and the least type of angula has only 6 yavas The hasta thus is also of 3 types They are called Prāsava, Sādhārana and Mātrāsava respectively ('Samarāngaṇasūtradhāra', IX 5, 10, 28-30) In this Śāstra, one angula is called Mātrā, 2 angulas are one Kalā, 3 are one Parvan, 4 a Muṣṭi, etc, Aratni is a synonym of hasta (ib 40 44) Vyāma or Purusa has 84 angulas or 3½ hastas (śl 45)

[90] This is described in the 'Vāstuvidyā', VI 3-7 where it is shown how to avoid a coincidence of the Madhyasūtra of each of the buildings in the 4 directions, with the Madhyasūtra of the total site, etc The Madhyasūtras of the buildings are drawn at a distance of 11, 9, 7, and 5 angulas respectively, beginning from the east to the south, in the south, to the west, etc

[91] It is generally enjoined that no doors, etc, must be placed on the orthogonals, diagonals, concurrences and the centre of the site

[92] The 'Agnipurāna', ch XCIII 7-9, makes it clear that the concurrences of all the orthogonals and the following 12 types of concurrences are to be avoided, Mahāmarma, Anuja, Hala, Trisūla, Svastika, Vajra, Mahāsvastika, Samputa, Trikaṭa, Manibandha, Savisuddha and Padamarma (when making wells, etc) Amongst the southern texts, the 'Kāmikāgama', XVIII 19-20, enumerates 9 positions where no temples of gods should be set up Hṛdaya the heart, the centre, Vamsaka, the diagonal, Sūtrabandha, a concurrence of lines, Sirā, and 6, 8 or 4 Śūlas

[93] With reference on the other hand to the Vāstumandala, as the plan of the entire site (of a village, or a town, or the king's palace, etc), the position in it of a temple dedicated to a special divinity remains the same in Śaiva as well as in Vaisnava tradition Comparing the situation of the temples in a Śaiva text, the 'Īśānaśivagurudevapaddhati', Part III ch XXV 64-66, and a Vaisnava text, the 'Vaikhānasāgama', Ch II, it is seen that a temple of Śiva (Sankara) is assigned to Īśāna, the north-east, a temple of Viṣṇu or Varuna to the west Other forms of divinity are allocated to their, equally corresponding plots Buddha temples for inst are assigned to Sugrīva, south of Varuna, on the western side The place of Brahmā is always in the centre, and various forms of Viṣṇu for instance, are found in various places, they may also occupy the centre ('Vaikhānasāgama', l c) which is the place for temples of all the gods ('Tantrasamuccaya' See Part VII)

The position of the forms of divinity, in a Vaiṣnava temple is given most explicitly in the 'Kāmikāgama' and 'Vaikhānasāgama'

See plan, Gopinatha Rao, 'Elements of Hindu Iconography', Pt II Vol I, Appendix A

The terminology of the parts of the Vāstumandala, is given now according to Vāstu-śāstra

## A *The lines (sūtra) of the Vāstupurusamandala*

| | I Bṛhat Saṃhitā, Ch LII and Utpala's commentary | II Īśānaśivagurudevapaddhati, Ch XXVII | III Samarāṅgaṇa sūtradhāra, Ch XII | IV Vāstu Vidyā Ch VI | V Śilparatna, Ch XIII |
|---|---|---|---|---|---|
| Sūtra (cord, line) * | | the Sūtras are the Sirās of the Vāstupurusa (62) | are Mahāvaṃśas (27) | sides (nāḍī) and diagonals (rajju) are Sutras (13) | |
| Prāk sūtra | | is known as Ūrdhva vaṃśa (61) | | | |
| Udak sūtra | | is known as Parśva vaṃśa (62) | | | |
| Madhya sūtra | | | | middle line in the E W direction is called Brahmanāḍī diagonal S W -N E, Marma sutra, N W -S E, Jīvasūtra (5-6) | |
| Karna sūtra | | | | | |
| Sirā* (any tubular vessel, nerve, vein) | The 10 lines which are drawn from E W, and S N in a site of 81 squares Com (63) | Sirās in a Vāstu of 81 partitions (60) | Sirā = Nāḍī the 2 diagonals (25) | 2 diagonals in a 64 squares site from corner to corner are called Sirās (25-26) | [same as Vāstu Vidyā] (17) |
| Anusirā | | | The 8 lesser diagonals, XI 24 (37) | | |
| Nāḍī (vein any tubular vessel) | | | | N are 10 east and 10 southwards in the Vāstu of 81 squares (10) | in 81 squares Vāstu 10 lines facing E and 10 lines facing S (2) |
| Vaṃśa* (beam, back bone) | The 2 Vaṃśas are the main diagonals i e lines drawn from the angles, Roga Vāyu Pitṛs Agni Com (57) | Vaṃśas are the Kona rajjus (61) | The orthogonals minus the Mahāvaṃśas (27) | in 64 squares site the lines running eastwards and northwards are called Vaṃśas (25-26) | [same as Vāstu Vidyā] (17) |
| Mahāvaṃśa | | | The border and middle lines (27) | | |
| Anuvaṃśa | | | The lesser diagonals (28) | lesser diagonals in a 64 squares site (25-26) | at the sides of the Sirās (17) |
| Ūrdhva vaṃśa | | this name is given to the Prāk sūtra (61) | | | |
| Rajju (cord) | The four 'lesser' diagonals, (61) and Com (57) | | | lesser diagonals in an 81 squares site (10) | (diagonals) on either side of the Karnas (2) |
| Kona rajju | | Kona rajju = Vaṃśa (61) | | | |

* Note the interchange of names of orthogonal and diagonal lines (Sirā or Nāḍī and Vaṃśa) in the different texts

## B The intersections of the lines in the Vāstupuruṣamaṇḍala

| | Paramaśāyika 81 Padas (squares) | | Maṇḍūka 64 Padas (squares) I | II | III |
|---|---|---|---|---|---|
| Name of intersection | Br S, LII 62 | Vāstuvidyā, VI 8 17 | Samarāṅgana sūtradhāra, XII 28 32 | Śilparatna, XIII 2 10 | Vastuvidyā, VI 25 28 |
| Atimarma | concurrence of diagonals 9 in number | | | | |
| Mahāmarma | | conjunction of 4 diagonals and 4 orthogonals at the corners of Brahmasthāna | 6 great (mahā) marmas Face, heart, navel, head, breasts (XIII 6) | where 8 lines orthogonals & diagonals meet at the corners of Brahmā | conjunction in head (Īśa), face, navel (Brahmā), 2 breasts (Aryaka and Mahīdhara), heart (Brahmā) |
| Marma | measures ½ pada | meeting places of 20 orthogonals and 10 diagonals, 36 junctions of 3 lines which at the conjunctions appear as 6 lines | concurrence of orthogonals and diagonals | | conjunction of lines (orthogonals and diagonals) |
| Upamarma | | conjunction of 2 orthogonals 6 in each quarter altogether 24 | conjunction in the middle of padas (squares) | cf V V | cf S S |
| Rajjumarma | | conjunction of 2 diagonals which appear as 4 at the conjunctions | | cf V.V | |
| Upamarmānta | | In corners of Vāstu, conjunction of 3 lines (2 orthogonals, 1 diagonal) | | | |
| Sandhi | | the conjunction of 2 diagonals (is not avoided) | conjunction of orthogonals, its measure 1 Bālāgra (tip of hair) | | conjunction of 3 lines in the 4 quarters |
| Anusandhi | | 8 conjunctions of 5 lines (in the borders) | conjunction of angas its measure ½ Bālāgra | | |
| Laṅgāla | | | | | conjunction of 2 lesser diagonals |

## C Proportionate width of lines and intersections

| Width of | Bṛhat Saṃhitā | Samarāṅganasūtradhāra | Vāstuvidyā, VI 25-26 |
|---|---|---|---|
| | In a plan of 81 squares | In a plan of 64 squares | In a plan of 64, 81, 100 squares |
| Diagonal | 1/24 pada | main diagonal 1/16 pada<br>lesser diagonal 1/12 pada | |
| Orthogonal (Madhya sūtras, in V V) | 1/16 pada | Border and middle lines 1/10, the other orthogonals 1/8 pada | 1/16, 1/12, 1/8 pada |
| Marma | 1/8 pada | | |
| Sandhi | 1 Bālāgra | | |
| Sandhis of 'angas' | ½ Bālāgra | | |

While the position of the main diagonals is necessarily always one and the same, from the north-east to the south-west and from the south-east to the north-

west, there are differences in the number and position of the lesser diagonals As a rule they are drawn in the square of 81 compartments, across the third and sixth compartment on each side, altogether four lesser diagonals are thus drawn, or else in later texts ('Samarāṅganasūtradhāra', XI 26-29) eight diagonals are drawn In the 64 compartments only 4 of the lesser diagonals are drawn ('Vāstuvidyā', VI 25-26)

The 'Bṛhat Saṁhitā', LII 61, gives the names of the divinities who occupy the squares in the border of the maṇḍala which are connected by the diagonals They extend from Vitatha to Śoṣa, Mukhya to Bhṛśa, Jayanta to Bhṛṅgarāja and Aditi to Sugrīva (Figure on p 32) The text does not say which of the two corners of the respective squares, on the border line, these oblique lines connect, if it is assumed that the lines are drawn from the meeting of each of the four sides with the third perpendicular on each side, including the border line, the rule holds good for the mandala of 64 and of 81 squares The 'Bṛhat Saṁhitā' gives no special indications concerning the square of 64 compartments If however, the meeting points of each fourth perpendicular line with the respective side line are the points of departure of the diagonals, the names of the divinities must be different in the mandala of 64 squares This is so in the 'Vāstuvidyā' where the names of the divinities are given through whose plots the lines pass from the 4th point of junction on each side They are Bṛhatkṣatra to Varuṇa, Bhallāṭa Āditya, Indra to Yama, and Candra to Puṣpadanta

A widely used manual, the 'Viśvakarmavidyāprakāśa' (83-85) explaining the mandala of 64 squares, enumerates the series of oblique lines from Vitatha to Śoṣa, etc , and supports the statement of Varāhamihira The difference is that in the texts where the lines are to be drawn from the third point of juncture, the crossing of the diagonals is nearer to the centre than when the oblique lines are drawn from the fourth point of juncture, on each outline The 9 specially vulnerable points (atimarma) of the 'Bṛhat Saṁhitā' fall into the Brahmasthāna and immediately around it

If the corners of the Brahmasthāna are 'mahāmarma' the diagonals would have to be drawn from the crossing of the 3rd perpendicular and the outline, in the square of 64 parts, and from the crossing of the 4th perpendicular and the outline in the square of 81 parts If this is the meaning, the indications of the 'Bṛhat Saṁhitā' mean In a square of 64 parts the diagonals have to be drawn from the crossing of the third line (perpendicular) with the side line In a square of 81 parts, the diagonals have to be drawn from the crossing of the fourth perpendicular line with the side line The names of the plots of the divinities remain the same, but the opposite corners are referred to in each case, the one nearer to the corner in the mandala of 64 squares, the one away from the corner in that of 81 plots [94]

[94] The diagonals in these 2 cases then would have to be drawn at a distance of the diagonal of one small square in the 64 plot , and of 1½ small squares in the 81 plot , JISOA, l c , p 184 The same points of crossing, however, are meant as starting points of the diagonals, in the two types of plans, by the 'Vāstuvidyā', l c , where the 4th crossing from the corners, is the point of departure of the diagonals, in the mandala of 64 and of 81 squares

These complexities brought about by the alternate use of the mandalas of 64 and 81 squares, are increased by the reference of the Marmas to the 'body' of the Vāstupurusa They are said to be the head, face, heart, etc of the Vāstupurusa in the plan of 64 squares The 'Vāstu-Vidyā' gives the names of the divinities where his head, face, etc , come to lie This distributes the Mahāmarmas between the North-East and the Centre and not around the Centre, as the Vāstupurusa should lie with his head in the East in the mandala of 64 squares Yet the texts quoted put his head in the North-East, a position which the Vāstupurusa should occupy in a square of 81 parts These various assimilations and combinations however are unanimous in their intention It aims at linking up the building and the plan in which is laid out its meaning The building draws its power from the Vāstupurusa who lies at its base and converts, by his name and presence the Plan of Existence (vāstumandala) into the shape of the Purusa, in whose likeness the temple is set up [95]

[95] 'Agnipurāna', ch LXI 11, etc , the Prāsāda as Purusa , 'Viṣnusamhitā', XIII 60-70 , see also Parts V and VIII

# THE SERIES OF 32 TYPES OF THE VĀSTUMANDALA

While the Vāstumandala is laid out by the subdivision of the total square, the temple with its parts has its meaning displayed in the opposite direction, from the Centre of the square, the Garbhagrha, towards its perimeter. The Vāstumandala is a prognostication, a forecast and 'tonic' of the contents which will be built up in the temple, it is in a literal sense, its programme. This does not imply an identity of the actual plan of the temple, with the mandala. The actual and indefinitely varied temple plans have in the Vāstumandala a prototype, it gives the widest margin to their possibilities. The two generally accepted Vāstumandalas, of 64 and 81 squares on the other hand are not the only varieties of their kind, but are part of an arithmetical series of 32 plans. It progresses from a plan of one square to one with 1024 square subdivisions, that is having a side length of 32 units. The number 32 is half of 64 and it is 4 × 8, it belongs to the series of 'opposites in balance', to a progression beginning with the simple square of the Prthivīmandala, which is again resolved in every one of the 32 types in the Brahmasthāna, in the middle with its 4 or 9 squares around the central point or in one central and only square. Thirty two is also the number of the Padadevatās, arrived at by a subdivision of the border of the square.

Each of the 32 plans has its name. Mandalas 1, 2, 3 and 7, 8, 9 have each their significance, the others are constructed as reductions by analogy or as amplifications of these six plans.[96]

The first plan, called Sakala (commensurable) consists of one square (pada) only. It is ordained for hermits (yati) as seat (vistara) or the priest for making a great, devouring fire for sacrifices to the Fathers, to the immortals, and so on, and for worship of the Guru, Sūrya, Yama, Varuna and Soma are stationed in the East, South, West and North along the cord (which delimits the plot, 'Mayamata', VII 22). This first type of planned, commensurable plot does not seem to have been destined as site of a temple.[97] It was an enclosure round the sacrificial fire.

[96] Of all the texts, the account of the 'Mayamata', VII 1 52, is the fullest and most lucid. It is followed here. The complete series of 32 types is not acknowledged everywhere. The 32 maṇḍalas are 'āsanas' or seats of different types, of divinity. They correspond in number to the 32 'āsanas' of Yoga practice. The 'Samarāṅganasūtradhāra', III 52, considers the mandala of nine squares as the first, or the one of 16 squares (XII 1) as the least and that of 1,000 squares as the last (XII 12 and III 52). The 'Bṛhat Saṃhitā' does not treat of any other plan besides those of 64 and 81 squares. The 'Vaikhānasāgama' gives special importance to the 7 × 7 plan, etc.

The plan of 16 squares is made to accommodate 25 divinities, Brahmā in the centre in 4 squares, surrounded by 8 internal and 16 external divinities, a condensation of the layout of the plan of 64 squares. In the series of plans, the 4th, the one of 16 squares, is the first to show separately the central position of Brahmā. The 'Agnipurāṇa', ch XCIII 25-28 prescribes the Vāstu of a country (desavāstu) as of 3,400 squares (pada), there the Brahmasthāna has 64 squares. The highest number of squares in a Vāstu is given as 20,000.

[97] Some of the later compilations, as for instance, the 'Śilparatna', XI 24, are more circumstantial, moreover, this text states that Brahmā has his station there, cf 'Mānasāra', VII 51-56.

It is more likely that no hut was originally built on the Sakala plot to enshrine the fire which is described as great and devouring. However, lesser fires might have been kindled for similar purposes, by hermits in the huts in which they also dwelt, or in canopied pavilions, supported on posts and without walls, open on the sides.[98] The Sakala plan is that of a sacred square field, an 'agni ksetra', it is complete though without any structure. The next plot, called Pecaka, consists of four equal parts, 4 types of evil spirits, Piśācas, Bhūtas, Grahas with their poison, and Rākṣasas should be worshipped there. With its homage should be joined the rites which belong to the plot of Śiva unmanifest (niskala) and manifest (sakala) according to correct procedure, as prescribed, by those who know the rules (ib. 23).

The first plot, though without parts, is Sakala, complete in itself. In the second type, four kinds of evil spirits are fenced in, for appeasement or worship. With this purpose is combined the worship of Śiva, on the same field. Here Śiva in his commensurable aspect (sakala) covers the extent of the plots of the Bhūtas, etc., of the evil ones, comprehending the four, and at the same time his rites are performed there to Śiva without attributes and qualities and non-manifest (niskala). This second type of the sacred field is also without a temple.

In the third type of plan, the Pīthapāda of nine squares, the central square is occupied by Pṛthivī, and the 4 Vedas should be worshipped in the 4 directions (ib., cf. 'Śilparatna', VI. 26) surrounded on all sides by the respective divinities. *This plan is an amplified Pṛthivīmaṇḍala*, besides, in its construction it is parallel to those of the plan of a higher order. Here it is Pṛthivī, the earth, who holds the central square. "the measure (mā) is this terrestrial world" (Ś. B. VIII. 3. 3. 5)—and not Brahmā, the embodiment of Brahman, the Supreme Principle. In this, the Pīthapāda is unique among those plans which have a central plot. The two first plans are without it. They seem to begin the list of plans, as predecessors to planned building.

The fenced off square is a sacred precinct, a 'templum' in which the potency of the Principle is held by being defined within limits. The possibility of seizing it by drawing limits gives to the first plot, its name 'sakala', commensurable. The second type of plan, also commensurable, consists of four parts, full of different potentialities of decay, haunting, survival and evil. They are joint with and submerged in the Śiva Principle which covers them along with its own commensurable aspect. That makes the Pecaka plot the 'couch' on which evil is spread out, within borders which are also those of the Supreme Principle, thought of as commensurable (sakala). For this reason the 'Agnipurāṇa', ch. CCCV. 14, speaks of Śiva being manifested in a quadrangle (catvara). All this refers to rites and worship in an 'enclosure', a fenced off square without any kind of building on it.[99]

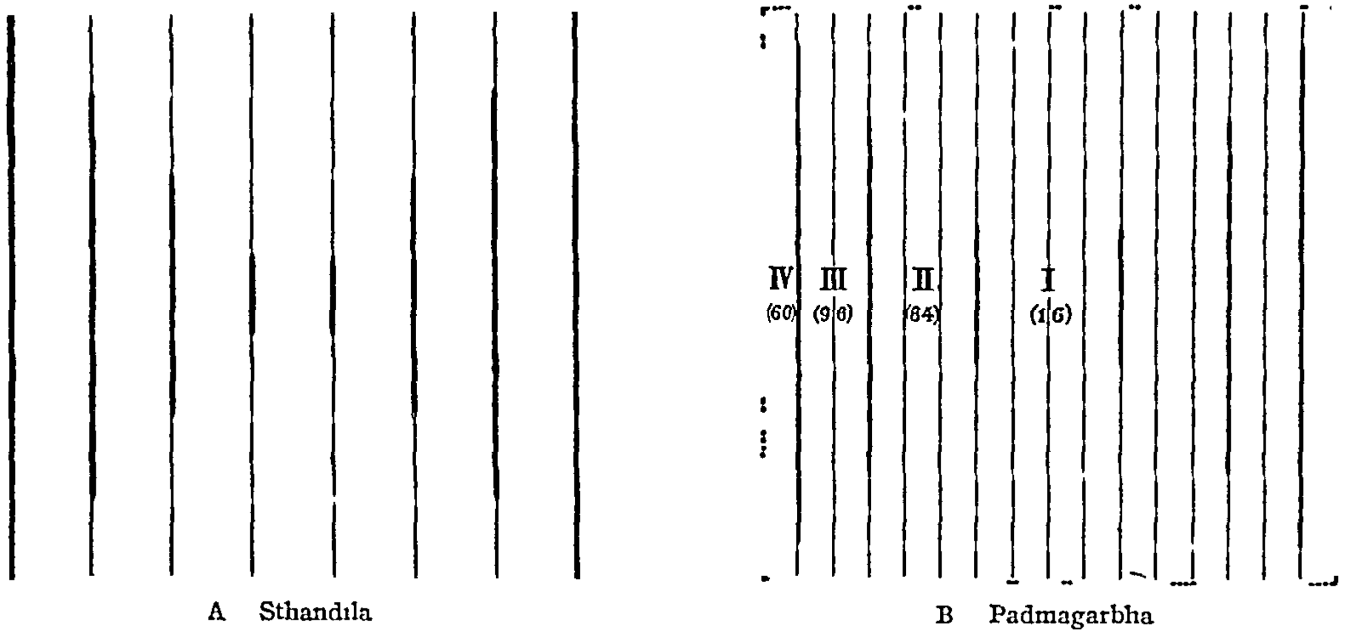
One should go on adding one square to the two adjacent sides ('Mayamata', VII. 29) and by gnomonic increase, derive each subsequent plan from the preceding

[98] As represented for instance in Sāñcī, East Toraṇa, second panel on the inner face of the left pillar.

[99] It appears almost as if the elaboration of the Vāstupuruṣamaṇḍala were due to Śaiva activity. This would be confirmed by statements like that of Brahmaśambhu (middle tenth century) that Vāstu whose body is Vāstu is spoken of in Vāstu śāstras and in Śaiva āgamas (I.P. III. ch. XXVI. 93 f.). Vaiṣṇava texts, like the 'Hayaśīrṣapañcarātra' or the 'Mahākapilapañcarātra' represent the identical theme in its general and in this case, Vaiṣṇava validity.

Those of even numbers should be treated according to the Mandūka plan of 64 squares and those of an uneven number of squares should be laid out in accordance with the Paramasāyika plan of 81 squares These two plans, once more are called 'sakala' and 'niskala'[100] which would mean that in either of them, the Supreme Principle should be worshipped beyond manifestation as well as in manifestation, in a temple, symbol or image (mūrti)

The 7th plan is of great importance in the 'Vaikhānasāgama' and other South Indian texts The Sthandila of 49 squares has Brahmā in the centre, surrounded by a triple enclosure The border around the one square of Brahmā is held by the gods, in 8 squares, the next border of 16 squares is assigned to men and the outermost border of 24 squares is occupied by Piśācas, the goblins This triple enclosure comprising the seven times seven squares (cf Ś B X 2 3 1, the Agni of 7 Purusas) and the progression of squares from the 1 in the centre to 8 to 16 to 24 is prescribed for the immovable image of divinity (dhruvārcā)[101] (Fig A) The triple world in its hierarchy of gods, men and ghosts ensconces Brahmā[102]




A Sthandila B Padmagarbha

(Fig A) This scheme is also extended to diagrams of more squares than the Sthandila (Fig B) It lies at the root of the Prākāras, the numerous enclosures of South Indian temples[103] The division of the 'plan' in zones around the

[100] 'Agnipurāna', XCIII, 30, or else one should worship the entire Vāstu Here the entirety of the Vāstu is contrasted with its several parts occupied by the various gods 'Sakala' as an attribute of the one 'pada' mandala also indicates that it is a complete Vāstu, despite the absence of the additional squares

[101] 'Vaikhānasāgama', ch X

[102] The 7 fold division of each, heaven, earth and the lower region is given in detail in the 'Viṣnupurāna', II, chapters II-VII

[103] The Garbhālaya of 256 squares is similarly laid out with three borders of gods, men and Piśācas 'Vaikhānasāgama' X (Fig B) The Brahmasthāna here occupies 16 squares, the gods and men are accommodated within the Vāstumandala, the Piśācas are relegated to the

Brahmasthāna, and assigned to gods, men and demons respectively, according to their distance from the centre, differs from the Vāstumandala on which the 45 Vedic gods dwell There, two belts surround the Brahmasthāna, the one of the 'internal divinities', the other of the Padadevatās and the extent of the plots occupied by each divinity is variable and consequently also the pattern of the plan, here however the three classes of beings are assigned their residence within unchangeable limits Two different methods of concentration (dhārana) and of site planning, two different traditions are represented in the Vāstumandalas of 64 and 81 squares on the one hand, of 49 squares, etc , on the other The latter bears no direct relation to the legend of the Vāstupurusa

He is not 'embodied' in this kind of mandala It is not occupied by 32 divinities of the border together with the 12 divinities of the interior, surrounding Brahmā in the Centre, the 45 Vedic gods do not dwell in the type of mandala given in Figs A and B In this scheme another tradition based on the enclosures and their number has consolidated into the plan of the temple

outermost border (IV) *The image (sitting or lying) is not placed in border IV* The 'Kāmikāgama', XXIX, 1-2 lays down the same scheme It holds goods for sites of 'villages' etc of 100, 81, 64 or 49 squares though with considerable reservations (ib 9-10) in which a compromise is arrived at of the situation of the gods in the Piśāca border, or of the dwellings of the castes, in the parts of gods and men

In the Sthandila plan, the side length is 7 units and the number of squares is 49, the central square is for Brahmā, the zone around it has 8 squares and is assigned to the gods, the border around it has 16 squares and is assigned to men, and the outermost border of 24 squares to the Piśācas The special significance of this distribution within the square of 7 is that it forms a geometrical progression based on the number 8 which belongs to the Mandūka mandala The Padmagarbha plan has no such numerical correspondences Cf 'Mānasāra', VII 20-21 , IX 178-180

# VARIOUS CLOSED POLYGONS AS SHAPES OF THE VĀSTUMANDALA

From the piling of the circular Gārhapatya (śālādvārya) hearth equal in area to the square of a fathom whose centre the Āhavanīya altar had occupied, the construction of a circle equal in area to a square had been carried out in ever renewed practice. The earlier texts on Vāstuśāstra do not record circular Vāstus; Utpala, the tenth century commentator of the 'Brhat Samhitā' describes in detail the construction of circular sites and also of polygonal shapes of 6, 8 and 16 sides, as well as of three sided Vāstus, and of buildings, villages and towns laid out according to these plans.[104] This appears a development around the principal Vāstu, which is and must remain square, a sacred precinct in any of the varied types of plans. This view is held by the 'Agnipurāna' (ch. XCIII. 40). "In the middle of the six sided, three sided, and circular plan, should be the square." In the transfer and application of the division of the square, to that of other closed polygons and to the circle, the activity of the principle is seen at work, whereas in the 'Agnipurāna' its immutability is symbolised by the preservation of the shape itself of the square in the very centre of each of the closed polygons.[105]

[104] Utpala adds: Meru is six-sided and Samudga round (Bṛ. Saṃ., comm. on LII. 56) and refers to Varāhamihira's text, ch. LV. 20, where these buildings are described. The 'Samarāṅganasūtradhāra', similarly speaks of the circular Vāstu of 64, and 100 parts, used in circular shrines (XII. 13 f). It has four enclosures and the divinities are distributed as in the corresponding square types of Vāstu. ch. XII. 20 deals with polygonal types of Vāstu of 3, 6, 8 and 16 sides.

The side (asra) in the 'Bṛhat Saṃhitā' belongs 1) to the wall of the Prāsāda, and 2) to its central buttress (bhadra, Pt. VII); a square plan with projections on three of its sides results; the fourth side is the 'façade' of the temple with the entrance and porch and is separately dealt with (Part VII).

[105] The building site, apart from the possibility of a conversion of its square surface into a circular one of equal area, is yet in another way connected with the circle. A great serpent (nāga) moves encircling every site by its movement in the course of a year. Whatever the name of the Pannaga, it is a manifestation of Ananta or Śeṣa, the Endless (=Ananta), the Remainder (=Śeṣa), which encircles in the perpetuity of its movement, and also supports on its head, the earth and the entire manifest world. On its coils Viṣṇu sleeps, in the intervals between the Kalpas, when every thing else has withdrawn and no other form exists. Uncoiled and proceeding in a circle, it moves from the East, to the South, West and North in the course of a year. When its head is in the East, its tail is in the South, its body covers the North-East, North, West and South. Head and tail do not touch. The head of the Nāga moves one degree every day ('Vāstuvidyā' VII. 2-6). The Vāstupuruṣa also is said to move. His feet lie in that Rāśi (Zodiacal sign) where the sun stands and his head is on the seventh Zodiacal sign from the Rāśi ('Vāstuvidyā' VII. 6). Following the sun, as the months advance the Vāstupuruṣa moves. According to Jyotiṣa Śāstra, he lies with his head in the East during three months, in Virgo, Libra and Scorpion and then moves to the South, etc. The solar Zodiac however is not inscribed in the Vāstupuruṣamaṇḍala as given on p. 32.

The Vāstupuruṣa who is one, thus appears in several positions of which the main are the 8 yonis; they are the Vāstupuruṣa at the 8 directions, or the 8 Vāstupuruṣas (Utpala's comm., Bṛ. Saṃh., ch. LII. 73).

The spatial order of the 8 directions simultaneously denotes a temporal order; the Vāstu is the time piece for determining the proper building season. This rotating Vāstu is called

VARIOUS CLOSED POLYGONS AS SHAPES OF THE VĀSTUMANDALA

The square Vāstupurusamandala, it has been shown, faces the four directions Its borders are occupied by the 8 regents of the cardinal and of the intermediate points At the same time this square diagram of the earth, ordered by time, in its extent, coincides in the mandala, with the Ecliptic, in its borders are accommodated the planets and the stars, and the movements of sun and moon The Vāstumandala is the place of manifestation, it shows the order that rules over it, cyclical time on earth, is occupied in its entire extent, by the Vāstupurusa The Vāstumandala indeed, is the Vāstupurusa His coming to earth and his identity are described in several versions, in all of them, the whole square field is the Vāstupurusa whose body is one with the presence and actions of the 45 Vedic gods, stationed in the Vāstupurusamandala, which is their yantra, the means of realising and the symbol of cosmic order on earth, its centre is the Brahmasthāna, and its superstructure is the temple

Caravāstu and is distinguished from the Sthiravāstu, whose position is fixed ('Vāstuvidhāna', X 15) His head is said to be always in the North East

The connection of the Vāstu with the ceaseless circular motion of the serpent shows ordered extension clasped by the time world, and carried in its movement For all permanent work (sthirakārya) the Sthiravāstu is to be worshipped, and for all impermanent work (carakārya) such as the habitations of man, or the setting up of a linga made of clay, the Caravāstu should be worshipped (ib 16) Temples are meant to last and are always built on the Sthiravāstu

# III

# PLAN AND SUPERNAL MAN

ૐ નમો ભગવતે વાસ્તુપુરુષાય મહાબલપરાક્રમાય સર્વાધિવાસાશ્રિતશરીરાય
બ્રહ્મપુત્રાય સકલબ્રહ્માણ્ડધારિણે ભૂભારાર્પિતમસ્તકાય પુરપત્તનપ્રાસાદગૃહવાપિસર કૂપાદેઃ
સન્નિવેશ સાન્નિધ્યકરાય સર્વસિદ્ધિપ્રદાય પ્રસન્નવદનાય વિશ્વભરાય
પરમપુરુષાય શક્રવરદાય વાસ્તોષ્પતે નમસ્તે ॥

"Om, I bow to the holy Vāstupurusa of great strength and valour
Whose body rests under all dwellings, Son of Brahmā,
Upholder of the entire Universe,
Whose head is placed to carry the burden of the earth,
Who makes all sites [receptacles of] his presence,
The towns and cities, temples [and palaces], houses, tanks and wells,
Who assures all kinds of fulfilment,
Of gracious appearance,
Support of the Cosmos,
Supreme Purusa,
Granter of boons to Indra,
Lord of dwellings, Obeisance "

'Paurānikavāstusāntiprayoga', Fol 25

# III

# PLAN AND SUPERNAL MAN

The Vāstupurusamandala is the magic diagram (yantra) and the form (rūpa) of the Vāstupurusa ('Vāstuvidhāna' of Nārada, VIII 26-32) It is his body (sarīra) and a bodily device (sarīra yantra) by which those who have the requisite knowledge attain the best results in temple building It is laid out in tabular notation as man and site (naraprastara, vāstuprastara, ib , 29)

In the Purusa, Supernal man, the Supreme Principle is beheld Beyond form and non-contingent, it is beyond description It is known by intellectual intuition as residing in man, the microcosm, and in the universe, the macrocosm Either is its place of manifestation Man and Universe are equivalent in this their indwelling centre Of this equivalence the Purusa is an image In the Purusa, the relation of the Supreme Principle (Brahman) and of manifestation is seen as coterminous The Supreme Principle in this aspect is called Purusa because it reposes or dwells in Integral or Supernal man as if in a city (Purusah = puri-śayah or puri-sādah, Yāska, 'Nirukta', I 13, II 3) The city is drawn as a yantra, a device in which is bound and situated the Supreme Principle It is a plan of its manifestation and as such it is also the body of the Purusa, itself without substance It is the site indwelt, and pervaded by the Purusa Any place where this body lies down, where *this plan is laid out by those who know it*, exemplifies the presence of the Purusa and is its 'bhūmi', the ground on which it rests [1] By its impress that piece of land, freed of all associations acts as primordial, undifferentiated substance (Prakrti)

"He is praised as Vāstubrahmā who is made first by Virāj" ('Vāstuvidhāna', VIII 14) "Purusa alone is this entire world, both past and future From him was born Virāj, and from Virāj was born Purusa" (RV X 90 5) [2] Virāj is cosmic Intelligence ruling over universal manifestation in its integrity under which is seen the activity of the Purusa, who himself is actionless, Virāj is the conditioned Principle, issued or born from the Purusa, the original impulse towards universal manifestation and refers back to Him, the knowledge of His presence is derived from His appearance as participator and director of the performance, the 'bhūmi'

[1] *Bhūmi is the support on which are established all beings and things (Sāyana, on 'Taitt Ār' III 7 1)*

[2] Trans W Norman Brown, 'The sources and nature of Puruṣa in the Puruṣasūkta', JAOS, vol 51, p 116

is the stage On it the directing, universal intelligence, has the form of Vāstu-Brahmā, It enters and fills the Vāstu, the site or stage of the building activity of man [3]

The play of manifestation is not a passion play, the sacrifice in which the Purusa is the offering is performed on the 'bhūmi' "With the sacrifice the gods sacrificed to the sacrifice" (RV X 90 16) Part by part the Purusa sacrifices himself into existence, the gods are born from him, from his mind the moon, from his eye the sun, from his mouth the fire, from his breath the air and from his feet the earth His being is given up to them and spent in them as far as he enters into manifestation, in as far as he is an active part of this all offered sacrifice of himself he is called Prajāpati, lord of progeny (prajā), totality of existence He spends himself in an ever renewed, ever proceeding sacrifice by which the universe subsists It takes place in time, time fathers it, is one with Prajāpati (the year, Ś B VII 1 2 11) and by his own sacrifice outlasts death, the principle of all form, of all that has definition and thus is finite [4]

## AGNI-PRAJĀPATI AND VĀSTUPURUSA

Prajāpati is offered up anew in every sacrifice, and inasmuch as the very dismemberment of the Lord of creatures which took place at that archetypal sacrifice, was in itself the creation of the universe, so every sacrifice is also a repetition of that first creative act [5] The Yajamāna, the sacrificer, who is the performer or patron of the sacrifice, by performing it becomes identified with Prajāpati by building up his body,—the altar,—just as the gods had done in the beginning when they restored Prajāpati, exhausted in creation

As they had done in the beginning, so is required a new and ever renewed sacrifice to build up the body of the Lord of creatures exhausted and dismembered by his sacrifice, and by the sacrifice renew the body, restore the Lord of creatures

[3] Vairāja Puruṣa or Pradhāna Purusa is the non conditioned, Supreme Principle in its contingent aspect, in the macrocosm and microcosm, Vāstu Brahmā stands here in analogical relation to Virāj as Virāj to Purusa In the 'Samarāṅgaṇasūtradhāra', II 4, Viśvakarmā says, "Brahmā created first Vāstubrahmā and then all the worlds" The principle which regulates extension is prior to extension The world is laid out in conformity with the principle This is shown in the ritual diagram of architecture and in the building of the temple, which is a likeness, on a proportionate scale, of the world and leads beyond it

[4] Ś B X 4 2 2 "Prajāpati, the year has created all living beings and things, gods and men, having created all he felt like one emptied out and was afraid of death",—Ś B X 2 6 4 (end) "Beyond the year lies the immortal" Ś B X 4 3 3 "The gods were afraid of this Prajāpati, the year, Death, the ender" Ś B X 4 3 8 "Prajāpati then spoke Lay ye down 360 enclosing stones and world filling (lokampṛṇā) [bricks], lay ye down 10 800 and ye will be laying down all my forms and will become immortal" 10 800 = 360 × 30 (muhūrtas in the year, one muhūrta is 48 minutes) = 135 × 80 (the amount of 80 of which the 3 Vedas consist, the sum total of knowledge and existence) "The self-offerer knows This my body is formed by those parts (anga) of the sacrifice (Ś B XI 2 6 13), this my new body is procured thereby"

[5] SBE vol XLIII Introduction

and keep up the unbroken sequence of an ever renewed universe in the analogy of the year that spends itself in its productiveness and out of its death arises anew In building up the sacrificial body, the altar, the sacrificer in so doing becomes the very altar itself, he builds for himself a sacrificial body and by doing so he is beyond time and death [6]

He builds up the altar in the likeness of the Universe and in accordance with his measure (vyāma) By this link it is his, a transformed, sacrificial body (Ś B I 2 5 14, Āp Ś S XVI 17 8) [7] Built into it at the same time is another measure, that of time Measure is expressed by number As many seasons as there are in the year, so many layers has the altar, and further, the total number of the surrounding bricks of the requisite altars is 360 By number the year is built into the altar and is its substance This is reinforced with grosser identities, the sacrificial victim, man and his successive substitutes (Ś B I 2 3 6-7), horse, bull, ram, and the goat, mingled in the mortar, their heads originally having been placed in the first layer of the altar[8], built into, and one with the substance of the altar, the sacrificer, as victim is his transformed self in the symbol of the golden man immured in the altar In gold, purest of all substances, man (purusa) the sacrificer, is one with the Purusa, their conjoint effigy, the golden figure, is sacrificial man, symbolical, without arms, the arms are the sacrificial spoons laid down on either side of the golden man Were arms made, this would be redundant [9]

The sacrificer puts down the golden man, laying him on his back (uttāna) He lays him down with his head towards the East, for (with the head) towards the East this Agni (the Fire altar) is built up (Ś B VII 4 1, 15, 18) [10]

The Fire altar is oriented towards the East, the direction of the sunrise, the ever new beginning It is piled up, a square to start with, facing the four regions and the one above They are bodily parts of Prajāpati, the year [11] The altar is built of bricks They are Agni's limbs, his joints (Ś B VI 1 2 31) Similarly, the area between the Āhavanīya and Gārhapatya altar has two 'spines' (Ś B VII 1 2 14), the middle lines from East to West (the prācī which is the 'prsthyā', Ś B III 5 1 9) and the other from South to North When Agni is laid down as the Gārhapatya hearth, the four bricks in the middle, are the body Two at the back are added these are the thighs and two in front, the arms, where the body is that (includes) the head (Ś B VII 1 1 18) [12]

Agni, the sacrificial fire and the place where it is lighted are one The altar

[6] Ś B VIII 5 2 16 "This then, is, as it were, an ascent away from here, but this earth is the foundation"

[7] "Let the altar measure a fathom (vyāma) across on the western side That namely is the size of man and the altar should be of man's size" 'Tait Samh', V 2 5 1 "With man's measure he metes out, man is commensurates with the sacrifice"

[8] Ś B VII 5 2 1

[9] Ś B VII 4 1 45, 'Taitt Saṃh' V 2 8

[10] 'Kātyāyana Śrauta Sūtra', XVII 4 10 The sacrificer is to lie down so as to cover the gold man, this rite of identification is allusive by its performance as the gold man is by its form

[11] They are five in number, the 4 regions and the upward (Ś B VI 1 2 19)

[12] With reference to man, the microcosm, and his body, the several classes of bricks laid down in the layers of the Agni, are explained in Ś B VII 5 1 35 The Svayamātrnnī, the lower immanent breaths, the Dviyajus, the hip, the Retahsic bricks, the ribs, the Visvajyotis

with its structure, with its fire, is called Agni Its function is to carry up the sacrifice, so that it reaches its destination beyond time and death The Fire is the actual performer of the sacrifice in which it is assisted by the sacrificer, his sacrificial self is one in nature with the burning flame, it consumes the lower self of the sacrificial victim, Agni is the sacrifice of the Yajamāna, and of Prajāpati, the year, of the contingent aspect of the Supreme Principle Agni, whose emblem is the flame consumes itself, as sacrificial victim He 'enters' the five animals, or sacrificial victims, man, bull, horse, ram, he-goat He becomes those five animals (Ś B VI 2 1 2-3) The conversion of their natures imbues the bricks which form Agni's limbs and joints

The goat is the last of the sacrificial animals Into it has passed the sacrificial essence of man from whom it went to the horse, and then to the bull, and finally to the he-goat The goat remains the sacrificial animal, the victim for all others, the animal consumed by and transformed into Agni It is Agni, who is sacrificed as animal victim (Ś B XIII 2 7 13, 'Vāj S' XXIII 17) "Agni was an animal They sacrificed him and he gained that world wherein Agni (ruleth), That shall be thy world, that thou shalt gain" The goat is the animal-form of Agni, it is produced from Agni's heat (Ś B VII 5 2 36) This is Agni's heat and also that of Prajāpati The he-goat means Prajāpati Prajāpati, the finite form of the Puruṣa, is one with Agni and the Fire Altar (Ś B VI 1 1 5), and as all-offered, self-offered victim he is one with the goat, which as accepted offering, burnt up in its animal nature and transmuted substance, is un-born' (aja), uncreate [13] It is from there that the gods went to the Godhead, to the summit (Ś B VII 5 2 36)

The identification of the sacrificer and of the act and material of the sacrifice with Agni-Prajāpati or Purusa manifested, rests on a middle term[14] which comprises the structural altar and the sacrificial victim The building of the one and the transmutation of the other are the means by which is cancelled the initial disintegration which is the beginning of the universe Prajāpati having spent himself and fallen down exhausted, is re-built The work of architecture is one of restoration of his body The body of Agni-Prajāpati is a universal symbol Its images are those of the first and last of sacrificial victims, man and goat, while bricks, and parts of the victims are embedded in its gross substance, number and measure constitute the subtle substance of its plan and structure By its number it is a monument to time which is regulated, bounded and overcome In the extent of the Fire altar, time going round is caught, embodied and mastered in the identity of the sacrificer and Agni-Prajāpati laid out from East to West

bricks, the breast-bone , the Ṛtavya bricks between the shoulders, the Āṣāḍhā, the neck, and the Kūrma, the head

[13] Speech is Aja, "uncreate" Speech, the Word is the Veda, Primordial Knowledge, which is 'unborn' and eternal The letters of the alphabet are articulate sound and are the body of the word The 51 letters of the Sanskrit alphabet are known to be distributed over India, as Pīṭhas of Śakti As signs which stand for articulate manifestation in its several degrees and parts, the letters (of the rhythmic formulae, mantra) are inscribed in ritual diagrams (yantra) Re the letters inscribed in the Vāstupuruṣamaṇḍala, see 'Samarāṅgaṇasūtradhāra' XIV 32 35 'Tantrarāja tantra', 'Manoramā', comm XXV 8-10

[14] P Mus, BEFEO XXXIV p 234

The symbolism of the Vedic altar, Agni, is continued in the Hindu temple, in its plan The Vāstupurusa of this mandala is indeed Agni-Prajāpati It is drawn on the ground and not piled up No fire burns on it, the temple is set up on it The image of the Vāstupurusa coterminous and one with the mandala is drawn in the likeness of man His head lies in the East, in the mandala of 64 squares, the legs opposite, body and limbs fill the square No bricks are laid down which had been identified with the several parts of his body The bricks were square, now squares are drawn, lines separate and connect those parts and limbs and are their joints and vital parts These must not be hurt The lines too (nādī), belong to the anatomy of the subtle body of the Vāstupurusa, they are channels of energy as the nerves are and the arteries in the gross body Their prototypes are Prāna and Vāyu The spine (vamśa) of this Purusa of 64 squares, is the middle line of the plan of the temple, as it is of the altar

## THE SUBTLE BODY OF THE PURUSA AND ITS PICTURES

In the net of this plan the figure of Man is caught, not by its likeness, but by its proportion and symmetry in its parts, the "head" confronting directly the aim of his being (the East, where the sun, light of consciousness, arises), the feet at the opposite end, a schematism in which the figure of Man is seen fitted into the square plan of the extended universe It consists of name and measure Such a picture or image (pratimā) is a workable and not necessarily visible, analogy, not of the human being but of the order by which it is upheld Its diagrammatic field of co-ordinates, intersections and diagonals is sensitive to any interference with its order and in this respect it functions like the subtle body of the human being

Such constructions have wide currency in Indian thought where they signify the universal law as a working entity For the sake of identification and reference, the whole of it and its parts are placed and named according to the parts and limbs of the human body Purusa in these 'images' is a term of reference It affords a means of location of the several parts within the whole, and an identification by transfer of one's own bodily frame into the special design as well as an introduction of that image into the corresponding disposition of one's own body The body here means nothing but a place of co-ordinated activity, each part being the seat of a special function

The reference to the 'figure of man' as a place of co-ordinated function, is made factually and repeatedly in Brāhmanism and Buddhism, in sacred texts and works of art The 'Āpastamba Śrauta Sūtra', XV 15 1 for example prescribes that a figure of man be laid out composed of the ritual implements of the Pravargya sacrifice Three cauldrons form the head, the milk buckets the ears, and other sacrificial instruments and objects are the various parts of the body

Similarly, the presence of Buddha is referred to in reliefs in Sāñcī (North gate, left pillar) and Amarāvatī by the following allocation footprints, at the place of the feet[15], life-tree or pillar as trunk and axis of the body, wheel (cakra), etc , as head and sun-shade (chatra) above it

[15] In Amarāvatī, the throne is added, above the footprints, to this symbol of "total manifestation" See Coomaraswamy, 'Elements of Buddhist Iconography', Pl I 2, etc

The Purusa of the 'Purusa Sūkta' is the archetypal, all embracing term, in its analogy are drawn the specified Purusas and the corresponding diagrams of universal time and situation such as the Ātmapurusa who is Duration,[16] the Kālapurusa[17] who is Time and whose surface is outlined as that of man and marked in its extent by the signs of the Zodiac The Naksatrapurusa[18] correspondingly contains the signs of the lunar asterisms, and other star pictures, such as the Śisumāracākra,[19] this Purusa is related to the Vāstupurusa With the star pictures, the description of the Vāstupurusa as support of the building has one trait in common he is described as lying with his face turned down, to the ground, whereas Agni Prajāpati of the Vedic altar lies facing upwards Dhruva, the Pole star, is described as moving with his head downward round the summit of Sumeru, as if looking at it [20] If the reconstructed Agni Prajāpati faces upward, this connotes "an ascent from here" (Ś B VIII 5 2 16), an aspiration towards and attainment of the higher region From there Dhruva looks down, his face turned to the earth

[16] 'Viṣnudharmottara', as quoted by Alberuni, 'India', vol I ch 32, p 321
[17] 'Brhajjātaka', I 4
[18] 'Brhat Samhitā', CIV 1-5, 'Matsya Purāna', LIV 7 The Nakṣatra Purusa Vrata is worship of Nārāyana In the rites of the 'moon vow', the Candra-vrata, the Moon, Lord of the Nakṣatras, is beheld as Puruṣa The rite is performed when Candra is joined with the asterism Mūlā when his feet are joined with Mūlā, his legs in Rohini, knees in Asvini, thighs in the 2 Āṣādhās, etc 'Mahābhārata', XIII 172 3-10
[19] 'Matsya Purāna', CXXVII 19-29
[20] ib, 28-29 cf note 43

# THE DESCENT OF THE VĀSTUPURUSA

A descent, a down going, further and further remote from perfection is the process of this world-age The initial disintegration from which the world has its beginning is known not only as a dismemberment but also as a descent, or falling off, from the Supreme Principle and a coming to earth This is told in the many versions of the story of the coming to earth of the Vāstupurusa [21]

In principle, it has its parallel in the falling to earth of the severed limbs of the dead Satī All over India, wherever a part of her dismembered body fell Pīthas come into existence All of them together represent the wholeness of India as a sacred land In a map of the sacred geography of India each Pītha would have to be marked by one of the letters of the alphabet, of which there are 51 in the Sanskrit alphabet, symbols of lettered sound and of the Word The Vāstupurusa in his fall, defeated, yet whole, on coming to earth, acquires the shape of his yantra to which are assigned 16 letters of the alphabet

The 'Brhat Samhitā' (LII 2-3) narrates Once there was some existing thing (sattva)[22] not defined by name, unknown in its proper form[23] it blocked heaven and earth, seeing that, the Devas (gods) seized it of a sudden and laid it on the earth face downwards In the same position as they were when they seized it, the Devas stayed on it where it lay Brahmā made it full of gods and called it Vāstupurusa The commentary adds Brhaspati says In the Krta Yuga there was a Bhūta "Existence", it spread through the 14 worlds [24]

The gods assaulted the Thing, put it down, and settled on it [25] They came to live on it for ever, and this twofold Thing, Brahmā called Vāstupurusa, the Purusa of Vāstu

Cosmogonically, this is a story of the first appearance of Existence, once it is, it is unprincipled yet all filling for to it nothing save itself seems to exist—whereas the very fact of its existence is possible only in that there is something outside it

[21] The story of the origin of Vāstupuruṣa is not unanimously told, see p 77

[22] Sattva , Bhūta , these are the two words which designate the Vāstupuruṣa before he received this name They are translated as "Existence", (thingness), Sattva becomes Vastu , and Vastu, existence, substance, becomes Vāstu, a residence and building site

[23] Comm of Utpala "Kimapītyamirdistanāmā aparijñātasvarūpa" Kern, JRAS 1873, translated ch LIII 3 (for LII 3) "being of immortal substance", and Vāstupuruṣa as "dwelling house personified" This is not according to the text, or the commentary the being (sattva) is nameless and unknown in its very self or proper form

[24] The 14 worlds are the seven lower, and the seven upper regions , The 7 Pātālas beneath the earth rest on Śeṣa (Visnu) , above these are the seven spheres of the earth, the air world, the Heaven world, and the Higher spheres (Bhūrloka, Bhuvarloka, Svarloka, Maharloka, Janaloka, Tapoloka and Satyaloka ('Visnupurāna', II, V and VII)

[25] The fall from being into existence (sattva , bhūta) was a struggle of long duration, one of many in the war of Devas and Asuras, Titans and Angels, gods and demons The 'Manuṣyālayavidhi' (printed in Malayālam) tells of the Bhūta filling the extent of the universe with his body during the Tretā Yuga According to the other texts however the descent took place already at the end of the Krta Yuga, the Golden age

As Existence goes down, this 'outside' is above it, it is the gods, and its own place is down below them, and its area is as large as they can stand on. They give it definition. Brahmā finally settles it and gives it its name in the acquired shape from the conflict and its solution.

The gods had raised Prajāpati who had fallen exhausted, having discharged from himself the entire universe (Ś B I 6 3 35-37, 'Pañcaviṃśa Brāhmaṇa', IV 10 1, VI 5 1). But the nameless thing of undefined shape, altogether unknown in its nature is not procreative, it looms large, swollen by its power, which in the end is converted into a base on which the gods have their perennial stand. This is their work.

It is prescribed that they have to be strengthened and confirmed in their task by repeated sacrifices and offerings before a temple is built and even after. Vāstupuruṣa too must be appeased at every new undertaking in connection with the building which he will have to carry. The peace obtained by Vāstu on earth, with the concurrence of the gods, is a settlement in the beginning. This ordinance however retains its validity only by an ever renewed rite of Vāstuśānti.[26] In it the Yajamāna, the builder or patron, (kāraka), in his ultimate aim is brought into communion with the Vāstupuruṣa. The *Kāraka has been made aware that he is* one with the Vāstu, by different magic signs and warnings felt in his body, prior to the drawing of the Vāstupuruṣamaṇḍala. Now, by the repeated rite of Vāstuśānti he gives peace to the Puruṣa "Existence", which this Puruṣa needs in order to endure. It is communicated to him through the gods on his body who are his surface and outer covering and through the builder, by the performance of the prescribed rites.

The ritual restoration of peace to the Vāstupuruṣa is to be performed recurrently, from the beginnings of any architectural work. The firmness which is so essential a requisite of the building ground, is now produced on the subtle level of the Vāstupuruṣa. It is the stability of Existence being at peace with itself. The rite of Vāstuśānti and the ensuing building activity itself are acts of liberation. They are performed by the priest (sthāpaka), the architect (sthapati, kartṛ) and the builder (kāraka) in collaboration.

Neither through the sacrifice nor as the play (līlā) of the Supreme Principle is the Vāstupuruṣa come into existence and laid down. Descent and dichotomy, fight, defeat and purpose in being defeated so as to sink to the bottom whence every building activity is to arise, is the function of the Vāstupuruṣa. For he came to earth in the Kṛta, the perfect age, when there were neither buildings nor temples, nor images, then the gods could be seen eye to eye, directly (pratyakṣa).[27]

The story of the 'Bṛhat Saṃhitā' is amplified in the 'Matsya Purāṇa'.[28] The

[26] Vāstuśānti and Vāstuhoma, the rites of appeasement and offering to the Vāstupuruṣa are described in detail, in 'Īśānaśivagurudevapaddhati', III ch XXVII, JISOA, Vol IX pp 162 f.

[27] 'Viṣṇudharmottara', Part III ch XCIII 1.

[28] 'Matsya Purāṇa', CCLII, 5-19. Versions of this account are also given in the 'Vāsturājavallabha', II 1, 'Manuṣyālayacandrikā', II 27-28, 'Mahīmanuṣyālayacandrikā', Comm 'Sārārthadarpaṇa', p 31. In the last named version, Śiva-Rudra fights Kāla. The sweat of Śiva or of Bhārgava is produced by fiery heat (tejas) or wrath. In this sense it is also said that Sāvitrī, the mother of the Veda was born of the sweat of Kālī's body.

Bhūta, Existence, is said to be born of the sweat of Śiva who causes (kāranātmā) the dual creation (dvaitasrsti) when he fought the demon Andhaka (Blindness) The cause itself (kāranarūpa) is Tamas, Darkness in which lives the demon Andhaka, it is the quality inherent in the fall from the Principle which Manifestation or the world of duality, implies [29] The fall from the principle is embodied here in the demon Andhaka, in order to fight it a corresponding tendency is expelled as sweat from the body of Śiva This is the birth of Undefined and Nameless, the Asura

In some of the later variants of this version, Undefined and Nameless is described as Asura, full of power and pride [30] Asura, however, is the Supreme Being, in the Rgveda[31] and is transferred, like the name of Purusa itself to the Vairāja Purusa and other aspects of the Purusa, and to the manifested Deity, under the name of Indra, Agni, or Varuna In a continued descent from the Principle, Asura becomes the name of those fallen from the Principle and who are demons [32] So 'Existence' is an Asura fallen by his pride [33]

The story of the fall of the Asura is told with a further variation and in detail in the 'Īśānasivagurudevapaddhati' [34]

"In former times, in the war between the gods and the Asuras the Asuras were destroyed, they were crushed by the gods with Puramdara at their head, through the greatness of the power of Visnu Their Guru, the son of Bhrgu,[35] who was of an impetuous disposition, became highly incensed and sacrificed a goat with auspicious marks as an oblation in the fire That goat became a goat-headed Asura through the sweat which fell into the fire as he was offering the oblation It rose (from the fire) covering earth and sky with its body of horrifying dimensions and asked the great sage "what shall I do?" The son of Bhrgu replied to it, as it loomed terrifically "Expel from heaven the gods whose minds are dull" Thus spoken to, it rushed at the gods intimidating them with roars, and scorching, as it were, the three worlds with the flames that issued from its mouth In fear, the gods with their troops expelled (from heaven) approached Śambhu, the all pervading and fearless one, who is decorated with ashes They were completely routed by their defeat by the son of Bhrgu, Śiva, their protector, ordered the

[29] "Asūryā nāma te lokā andhena tamasāvrtāh" Those worlds are called 'asūrya' (where the sun does not shine and which) are covered with blind darkness 'Īśāvāsya Upaniṣad', 3

[30] 'Manuṣyālayacandrikā', l c

[31] RV VIII 42 1, the 'māyā' of the Asura, X 177 1, V 63 3, 7

[32] Coomaraswamy, 'Angel and Titan, An Essay in Vedic Ontology', JAOS, vol 55 p 384, with reference to Indra, says that he "remains an angel even in his pride, being like Satan fallen not in nature, but in grace"

[33] Pride is the innate disposition of the Asura, the Titan or demon (āsura-bhāva) By it they fall or were driven from heaven

[34] 'Īśānasivagurudevapaddhati', III ch XXVI 93 f JISOA, l c This version is repeated in the 'Śilparatna', VII 4-29, 'Vāstuvidyā', IV 47, comm and appears known to the different account in the 'Skandapurāna', Nāgarakhanda, CXXXII 9

[35] Bhrgu is the son of Varuna (Ś B XI 6 1 1), born of Varuna's sacrificial fire (Mbh Ādi V 7-8, 'Manu', V 1) He studies sacred science, believes himself above his father, above everything His son becomes the Planet Śukra, his story is interpolated in the 'Īśānasivagurudevapaddhati', see infra He is the priest of the Asuras

Fire which issued from his third eye in the shape of a spirit (bhūta), to save them "Thou should burn the cruel and over-grown goat-Asura after having crushed the son of Bhrgu "

Thus spoken to, the fire chased the son of Bhrgu, without rest, and he fled pursued through the three worlds He found no refuge but in Śiva who is 'decorated with ashes'

Then by the power of Yoga he made his body small and for protection entered the body of Śiva through the ear When he reached the belly of Śiva, he saw the whole universe rested there confidently, and took heart The three-eyed god, in his divine sight, saw him take shelter and without surprise he said to the sage with a smile "Fear not, O Bhārgava, I am pleased with thy diplomacy Having stayed within me you are my son, now come out at your pleasure I have bestowed on you the great sovereignty and supremacy among the planets In these three worlds, you shall ever regulate justice and injustice, rain and draught" Saying so, the three-eyed (god) discharged him through the semen-passage Thence he got the name Śukra (Semen) Then Śukra, knowing his own desire, bowed to the Lord and submitted "Contented am I, favoured am I, who is more fortunate than I, I have thus been graced with favour by the God of the gods"

To the Brāhmana Śukra, lying prostrate in salutation after saying so, the Lord, the all pervading, with the crescent moon upon his brow, being pleased, said "Ask another boon" Śukra (now) also made the frightened goat-demon prostrate himself before Śiva and ask for protection To the fallen demon lying like a stick, dejected, with his face to the ground, he said pleased "I grant you protection, and also the boon which is desired by you, O goat" Thus addressed by Śambhu the Asura said respectfully "May you pardon me the evil deeds perpetrated by me through ignorance so that I may through your favour dwell on earth with the concurrence of the gods Grant me this boon The gods, Brahmā, and the rest should be worshipped while residing in me" Hearing this, the carrier of the trident (Śiva) said "As you have asked me for a residence (vāstu), as a boon, your name will be Vāstupa (protector of 'vāstu') So be it (Derived) from the root 'vas' (meaning 'to reside'), reside now on earth (Vasundharā), and the gods Śatānanda (Brahmā), and the rest will be pleased to reside in you, henceforth, whosoever builds a divine or human residence, to dwell on this earth, should first worship you with flowers, incense, lights and special tribute (bali) You and the deities residing in your body should be worshipped in proper order Prosperity comes to those who perform the worship of Vāstu laid down by myself and who reside in those buildings and houses May the temples (and palaces, prāsāda) and the houses (bhavana), etc, which are built without performing the worship of Vāstu, and all that is done there, be demon's work Thus the god (Śiva) granted boons separately to Śukra and to Vāstupa, and engaged gods to reside in him, and vanished thence

Through the boon of the Lord, the all pervading, the place thus oriented by the fall of the Asura, at Śukra's command, before Śambhu, became immediately the abode of the deities

In the same way even to-day, Vāstu lies on the earth with the head towards the north-east and the face turned to the ground Thus, as the desired boon was

obtained by Vāstospati from Śiva, so his worship is desirable while building Vimānas of both gods and men."[36]

In this version, narrated in the 'Īśānaśivagurudevapaddhati', the 'fall' is the sequel of an *Ābhicārika*[37] *sacrifice*. The Chāgāsura, risen from *Bhārgava's fire*, pervades the worlds.[38] He is produced from the heated energy (tejas) and intentness (tapas) of the Bhārgava. Bhārgava is the son of Bhrgu, who was born of Varuna's sacrificial fire. Out of this fiery conjunction, the sacrificial animal, the goat arises, invested with Asura-power.

The goat replaces man as 'sacrificial animal'. The sacrificer offers his own (lower) self in the sacrificial animal consumed by the fire. The goat is the contribution, of the heat of intentness (AV. XVIII. 2. 8). As a sacrifice it reaches its fulfilment and true state, in the fire and is 'produced' from the heat of the sacrifice (Ś. B. VII. 5. 2. 36). It is Prajāpati (Ś. B. V. 2. 1. 24) and is Agni[39] and also 'born from Agni' ('Tait. Samh.' V. 2. 9. 4). Agni was generated by Atharvan (RV. X. 21. 5), the ancient priest, the first to obtain fire.

The 'Skanda Purāna', *ib.*, CXXXII, 15, says: "the Bhūta is born from the hymn (sūkta) of Atharvan and the drop of nectar."[40] The reference of the 'Skanda Purāna' is to Atharva Veda IV. 14. 1-3. "Since the goat has been born from the heat of Agni, it saw (its) generator in the beginning; by it the gods in the beginning attained (their) Godhead; by it the sacrificial ones ascended the ascents". "Stride ye with the fire to mid-air, having got to the back of the firmament, to heaven, sit ye mingled with the gods". "From the back of the earth I have ascended to the atmosphere; from the atmosphere I have ascended to heaven; from the back of heaven I have gone to light."

The sacrificial goat born from Agni's heat carries the gods and the sacrificer upwards, to heaven and to light, in the Sūkta of Atharvan; the goat-Asura born from the Sūkta, swelled by pride sinks down and on him the gods take their stand and the temple is built up; with its plan it leads to the centre, and in its elevation to the upper worlds, and beyond them. The Āsura-bhāva (pride) of the Chāgāsura lays him low, "at the feet of Śiva" on the surface of the earth. Yet even so he carries the gods.

Further on the Sūkta of Atharvan continues: "In the eastern quarter set thou the head of the goat; in the southern quarter his right side" (AV. IV. 14. 7). The goat is laid in the position of Agni, which it is, and also of the Vāstupurusa which name is given to the goat-Asura on his having settled down in that position.

[36] Vimāna means to 'measure asunder', a building proportionate in its parts.

[37] Ābhicārika or 'black magic' rites are performed with the purpose of injuring one's enemy.

[38] "Encompassing" growing from the fire, at another occasion, assumes the shape of Vrtra, the concealer, who is ophidian in appearance. 'Tait. Saṃh.', II. 5. 2. 8. Ophidian, or goat-headed, the Asura arisen from a magic sacrifice, pervades the universe and must be defeated and assigned its place. Śukra (Bhārgava) the priest of the Asuras himself is descended from fire-born Vṛtra, for Bhṛgu, his father is born from Varuna's sacrificial fire, and Varuna and Vṛtra are equivalent (see Coomaraswamy, 'Angel and Titan', l. c., p. 409).

[39] Agni is presented as a goat. He is Chāgavaktra, goat-faced, as Naigameya Agni ('Mahābhārata' Vanaparva, 228. 27).

[40] *Amrtabindu here means sweat.*

## NATURE AND NAME OF THE VĀSTUPURUSA

The head of the Vāstupurusa lies in the East[45], such is the ancient tradition conforming with the symbolism of Agni "The head of the Vāstupurusa lies in the East, in the site of 64 squares" ('Samarānganasūtradhāra', XIV 11) But "the head of the Vāstupurusa should be placed in the North-East, in a site of 81 squares" (ib )[46] "The north-eastern direction is invincible" (aparājita, 'Ait Br ' I 3 14)[47] The site of 81 squares was specially assigned for worship by Ksatriyas, and for their buildings The sanctity of the north-easterly direction is that of work (karmamārga) That is their path of liberation

The symbolism of the Vāstupurusamandala has its origin in and retains its connection with the Vedic altar and the rites of the sacerdotal part of the Veda, the Brāhmanas It is adapted to the 'dharma', the rules of life of the Ksatriyas At the age when the Vāstuśāstras known to-day were compiled and at the same period when the many existing temples of stone and brick were built the two types of the Vāstupurusamandala, the one for Brahmans, the other for Ksatriyas co-exist and also commingle

They were a residue of traditions still known and practised though no longer realized in all their import On them, their 'tonic', the building of the temple rests, the disposition of the site-plan of the entire precinct is in consideration of the Vāstupurusamandala The ground plan itself of the temple is laid out in its analogy and with all the indefinite variations of its theme The ground floor (adhaśchanda) of the temple is planned with the Garbhagrha in the centre, this as a rule is square and corresponds to the Brahmasthāna It is surrounded by thick walls on which rests the high superstructure, these conform with the border of squares occupied by the divinities who surround the Brahmasthāna The buttresses and various kinds of projections of this wall are from the outer border of the square, the zone of the 32 Padadevatās, they form the perimeter of the temple The rhythmic structure of the Vimāna proceeding from its centre

[45] 'Samarānganasūtradhāra', XIV 11, XLV 18, 'Mayamata', VII 49, 'Vāsturājavallabha', II 18, 'Śilparatna', VII 34, cf 'Āpastamba Śrauta Sūtra', XVI 28 1 2 "He should pile a human figure of bricks, from East to West, its head formed by the head of the golden Puruṣa "

[46] 'Brhat Samhitā', LII 51, 'Īśāna-paddhati', III ch XXVI 125, 'Vāsturājavallabha', II 2, 'Manuṣyālayacandrikā', II 28, 'Śilparatna', VII 28½ The texts are not always explicit about the relation of the position of the head of the Vāstupuruṣa and the number of squares, the two varieties intermingle, the one of 64 squares and the head in the East, the other of 81 squares and the head in the north-east A not always consistent terminology (vamsa, nāḍī, etc ) results, see p 54

Priesthood and kingship have their distinct versions of one and the same Purusa who underlies their building activities

[47] The north-east is the direction facing which Prajāpati created creatures, and towards which the sacrificer offers oblations, it is the quarter of gods and men, and the gate of heaven Ś B VI 6 2 2-4

towards its perimeter is laid out according to the proportions within the network of squares in the ground plan (Part VII)

The ground plan of the temple, whatever may be its variations, is analogous to the Vāstupurusamandala and retains in its rhythmic order proceeding from the centre and in the modulations of its perimeter, the knowledge of the Vāstupurusa in all his parts The rhythm (chandas) of the ground plan is derived from the order in the Vāstumandala The relation of sacred architecture to the Vāstupurusamandala is reflected moreover in the sculptures on its walls, their iconography is essentially an iconometry (tālamāna) The distinctiveness of the sculptures rests upon their proportion and positions, their merit is in their form and results from a supererogation in the correct execution of the rules It exceeds the rules by intensifying their raison d'étre To this excess of application is granted an immediate realisation, possible only where the knowledge is perfect Its possession shows a freedom through which the grace of the Lord (anugraha) becomes impressed on the work It is in the 'readiness' (pratyutpanna) which distinguishes the inspired craftsmen whose competence has become effortless On the firm basis of iconometrical structure, itself correlated to and in continuation of the proportion of the temple, the many images have their place assigned to them as parts of the body of the building, their movements too and the relatedness of form in the single figures are similarly assigned

Unknown in its intrinsic form and nameless the Asura had come to earth Defined and named thenceforth he dwells on it In his extension he holds duration and within duration time runs its course Wherever his image is laid out, he fills the place to which it is applied, whether it is large or small, in its entire extent, like the ether which is even in a pot [48] The symbol of its ordered extensiveness is the square so that it is even said of him long ago there was a demon in the shape of a square (caturasrākrti) [49] This is his own, intrinsic form on earth, man or goat are but names and places of reference The rule of the square, the final and perfect form is established as long as the earth itself survives and will dissolve along with the stars at the time of universal dissolution (pralaya) [50]

In some accounts of his fall[51], the Asura is described as having been dug into the earth by the gods, or else himself to have dug a pit and entered it of his own will There he subsists, his substance commingling with the soil, the sacrificial victim self-offered, the prototype of all foundation sacrifices[52] similar to 'man' the first of the sacrificial victims in the construction of the Vedic altar No human sacrifice takes place during the established rites of Vāstu-śānti, Vāstu-homa, and

[48] 'Manuşyālayacandrikā', II 27-28

[49] 'Tantrarāja-tantra', ch XXX 4 f

[50] 'Śāradātilaka', III 2 comm quoting Mahākapiñjala

[51] 'Tantrarājatantra', 'Merutantra', quoted in 'Purascaryārnava', l c, etc

[52] Foundation sacrifices are offered in the belief that the condition of permanence of a great building depends on the sacrifice of a human being W Crooke, 'Religion and Folklore in Northern India', p 109, also 'Indian Antiquary', vol LVI, p 135, and Abbot, 'The Keys to Power' p 209 H Shastri, 'The Ruins of Dhaboi' p 2-3 tells of the architect Dabhane who was immersed for 6 years under the temple of Kālikā māta which he had built For further reference to sacrifice and burial below a building to be set up "so that by this act the pre-existing divinity of the place is reinforced" see P Mus, op cit p 674

Vāstu-bali It might have preceded them as it preceded the Vedic rites laid down in the Śatapatha Brāhmana, essentially however, each sacrifice is an eternal 'purusa-medha' [53]

Vāstupurusa, if worshipped as an image (mūrti)[54] is a fearful looking male figure He is as repulsive as Jumbaka, who is sacrificed by drowning, to Varuna[55], Jumbaka therefore becomes Varuna[56] Man, the sacrificial victim, figures here as an embodiment of the sacrifice of the lower self, the drowning of Jumbaka is alike to the sinking of the Bhūta to the ground and into the soil, this is the Asura's part down below the gods, yet simultaneously present with them, and their support [57]

As yet without name and form is the Asura at the beginning of his fall, for he has only then fallen from the state beyond name and form In his descent he becomes a Bhūta, an existing thing, and acquires name and form (chāgāsura) Estranged from the Principle, Existence desires to exist alone, it suffers defeat and is assigned its place on earth, one with the Devas who brought about the ultimate fall, appeased and at one with itself and in its proper place, its name is Vāstupurusa When, in one version of his story he sinks into the earth submerged in its darkness, his integrity is restored 'ab intra', self-sacrificed he does not die, "for he (the Purusa) is Death himself in the splendour of the immortal" (Ś B X 5 2 3) or Varuna

When he sinks down dark, hideous, impotent, submerged, and inactive, he has reached the ground where his identity is lost He lies wrapt in the darkness of his nature, the nature which pulled him down, now no longer distinct from it He has reached the other pole, where existence ceases, reintegrated into the darkness of the deity 'ab intra' There he lies submerged as Asura, at the same time converted into the gods, who have taken their stand on him and are his 'body' on earth

[53] A K Coomaraswamy, 'Angel and Titan', op cit p 401

[54] 'Mahānirvāna Tantra', XIII 63-66

[55] Āp Śr S XX 22 6

[56] Vāstupuruṣa as a form of Varuna (Vrtra), see 'Kāsyapasilpa', II 12-24, where he is beheld as Visnunārāyana and Mahājala (jalādhipa) "The recumbent is originally Varuna, supported on the back of the waters (AV X 7 38), finally Nārāyana Viṣnu" Coomaraswamy, 'A New Approach to the Vedas', p 61, Varuna (manifested deity) is sacrificed and re surrected Johannsson, 'Die altindische Gottin Dhiṣanā', p 128 Varuna is Asura and King, Lord over life and death, finally Nārāyana-Viṣnu He is self sacrificed deity This is exactly how, following the 'Merutantra', the Vāstupuruṣa-Asura-Prajāpati is shown as a righteous and wise king, who in order to keep his word, destroys his body ('Purascaryārnava', op cit, pp 105 6)

[57] The 'Skandapurāna', Nāgarakhanda, CXXXII 7 speaks of the Bhūta as arisen from the earth Here, indeed, has the divinity of the soil come to commingle with the Bhūta "born from the sūkta of Atharvan and the drop of nectar" (sl 15, ib) He had been made invincible by the rhythmical magic formula (mantra) of Śukra

The story is here adjusted to a particular Tīrtha, called Vāstupada and installed by Kātyāyana, the Brāhmana The potency of this Tīrtha is represented in its being the place of the arising of the Bhūta (it had been sent there by Munda, sl 15) Born from the Sūkta of Atharvan it is sent to do its work at this particular spot Battle, defeat, etc, are then described and the Bhūta is finally laid to rest Hari (Viṣnu) asks Brahmā to name the Bhūta —This is a Vaisnava version referring to a special Tīrtha, of the Vāstupurusa story which is told in Vāstusāstras and Saivāgamas (Ī P, III ch XXVI 93, f quoting Brahmasambhu)

In the microcosm, in man (jīva), Existence, the demon, correspondingly is known by the name of Pāpapurusa (the Purusa of Evil, the Evil person) He is thought of as an ugly black man, angry, with red beard and red eyes, holding a sword and shield, with his head always held low ('Mahānirvāna Tantra', V 99) residing in the left cavity of one's abdomen Thus he is known to be after the Sādhaka has dissolved and integrated all the forms of existence (tattva) one after the other, the lower always in the higher and finally in the origin whence they have arisen and his self has become free of them [58]

Existence, un-principled, fallen from the Principle, unknown to itself in its form, unnamed, this calamitous Asura at last allows himself to be caught in form and name In the story told in the 'Īśānaśivagurudevapaddhati', it has come to earth as goat-headed Asura and lying prostrate at Śiva's feet, it begs of him the boon which Śiva grants him, existence and residence (vāstu) on earth, so his name henceforward is Vāstupa, protector of site and building (vāstu) Derived from the radical "vas" which means to "exist" and to "reside", the Asura will reside on earth (vasundharā)[59] and Brahmā and the other gods will reside in him [60]

Vāstu, whose body is Vastu, existence[61], Vāstupa, protector of Vāstu, Vāstospati (Ī P III ch XXVI), lord of Vāstu, and Vāstupurusa (Br S LII 2) are variations of the name given to Existence made secure, steady[62] and laid out in order[63] Vāstospati is an ancient divinity Rudra Prajāpati married the Dawn and begot four sons The fourth is called Vāstospati or Grhapati—Agni [64] "When the father embraced his daughter (sky or the dawn), then he came also in contact with the earth and poured his seed there, then the gods reflected and fashioned out of it Brahmā called Vāstospati, the protector of sacrificial rites and the Lord of the site at the sacrifice" ('yajñavāstusvāmī', Sāyana on RV X 61 7) In 'Manu Smrti', the later Śaiva tradition and in Vāstuśāstra, the Asuratva, the Asura nature of Vāstospati is all there, and while he is the lord of the Vāstu, he

[58] 'Mahānirvāna Tantra', XIII, 42-46 describes the Vāstupuruṣa and his (12) followers Some of their names are Bhīṣana (ferocious), Raktalocana (red eyed), Koṭarākṣa (with deep sunk eyes), Vāstu-pati himself should be meditated upon as of ferocious aspect, with big belly, long ears, hairy body His followers carry sword and shield

[59] Vasundharā, the holding or carrying substance, or wealth (vasu), is a name of the earth, 'vasu', 'vastu' and 'vāstu' are from the radical 'vas', to exist, reside, vasu substance, thing, wealth, vastu existence, substance, vāstu residence dwelling, site, house See notes 65, 72

[60] 'Skandapurāna', Nāgarakhanda, CXXXII 29-30, after relating that the place finally remained quiet, makes Hari ask Brahmā, to name the Bhūta "since he reacted to the word and you also addressed him "Vāstu" (Vā astu) "be auspicious" (exist as residence, be a dwelling) let his name be Vāstu "

[61] Ī P, III ch XXVI, 93 f

[62] 'Āsv Gr Sūtra', II 8 15 and 'Pāraskara Gr S', III 4 3 invoke Vāstoṣpati, the "steady one" See Part I

[63] Also Vāstudeva ('Matsyapurāna') or its opposite Vāsturākṣasa, his followers are Vāstu daityas ('Mahānirvāna Tantra', XIII 42, 59-66) The Vāstupurusa is and remains an Asura and therefore both the roles of Deva and Daitya are his by nature He is and remains Vāstu-brahmā, created first by Virāj ('Vāstuvidhāna', op cit, VIII 14), or else by Brahmā by whom the worlds where created only afterwards ('Samarāngaṇasūtradhāra', II 4) cf Coomaraswamy, 'Angel and Titan', l c, p 374 "The designations Asura and Deva may be applied to one and the same 'Person' according to the mode of operation "

[64] R Shamasastry, 'Vedic Iconography', JISOA, vol X p 80

lies with his face down, the fallen Asura His overlord (vāstvadhipati) is Brahmā (Ī P, III ch XII 22) The duplication of Brahmā-Vāstospati, his two-fold nature as god and Asura is a record of his fall from the Principle into manifestation with its dichotomy While the Asura figuratively remains the larger, all filling, spread everywhere, in his inmost part, in the middle, in his heart there is Brahmā "In the centre of the building let him place an offering (bali) for Brahmā and Vāstospati conjointly" ('Manu Smrti', III 89)

In his benign aspect, Vāstospati is the protector of the home ('Nirukta', X 16)[65] He assumes all shapes[66], he is Rudra[67], such is his Asura-power, spread out on earth, where his realm coincides with that of Agni with whom he is identical in essence

Agni's sphere is the earth[68] He is the giver and protector of dwellings (grhapati, vāsaka, etc)[69] the radiant (vasu) among the gods[70] The Vasus, the sparkling ones, are the eight gods causing the mortals to abide (vas), the terrestrial region is their sphere of action (Ś B VI 1 2 6) Agni and also Indra[71], Prajāpati, Soma and other gods are invoked as givers of dwellings, all the Vasus[72], all these divinities have their station in the Vāstumandala Under whatever name the Vāstupurusa is known, his form on earth is square This form is his, as far as he is Yama, Death, the Dharmarāja whose city is square Its squareness was made use of by Viśvakarmā, the archetypal architect, as the shape of the first ornament he gave to manifestation

Vāstospati is the lord of the building and the Earth is the mistress of the house[73] She is the soil, on her he leaves his impress and she receives his seed This is the meaning enacted in the rites of sowing the seeds, etc (ankurārpana) and of depositing the germ (garbhādhāna) From the inception to the completion of the building, the indwelling divinity is worshipped by the rites of architecture "The wise man, who has taken a vow to consecrate a building, should perform the rites, beginning with the worship of Vāstu and ending with that of the Vasus"

[65] "Vāstospati (Lord of the vāstu)—Vāstu is derived from the radical 'vas' meaning to 'dwell'—is the lord or protector of the house"

'Bṛhad Devatā', II 41 (Macdonell, p 42) "But because being in the middle (sphere) he granting an abode (vāstu) to the world, protects it, therefore the son of Urvaśī (Vasiṣṭha) proclaims him to be Vāstospati"

Vāstospati as protector of the house RV VII 54 1, 55 1, AV VI 73 3, 'Taitt Saṃh' III 4 10 1, Āp Ś S VI 28 6, Pār Gṛ S III 4 7, Hiranyakeśin (SBE XXX) I 6 28

[66] RV VII 55 1 Pār Gṛ S III 4 7

[67] 'Taitt Saṃh', III 4 10 4

[68] 'Nirukta', VII 5

[69] RV I 60 4, VI 16 24, V 6 1 2, V 7 6, V 8 1, VI 48 8-9

[70] 'Ait Br', I 5 28

[71] RV VI 46 6 Prajāpati, Soma, Agni, Dhātṛ, are invoked as Gṛhapati, Āp Ś S XXI 11 2 and 8

[72] RV I 10 4 Vasu is the giver or cause of dwelling (nivāsakārana bhūta)

[73] Vāstospati=Agni—Prajāpati, 'Jaiminīya Br', II 4 "The year is the houselord, the earth is the house mistress"

('Mahānirvānatantra', XIII 178-179) The temple is dedicated as the residence (vāsāya) of divinity (ib 245)[74]

Unknown in its own form, its name as yet not defined prior to resting there, Existence has come to earth, fallen from the Principle, swelled with pride, it had become all filling, unprincipled as it is, it creates disorder and defeats its aim, accepts defeat on coming to earth, its valour proved and spent, it sinks down and receives name and definition Sunk to the bottom, it reclines there, rests and sleeps securely in its reintegrated identity, lost to the world, sunk to the ground, absorbed and one with it, and from then onward at the same time, for all time, till the dissolution of the very ground on which it rests it is one with the gods who have defeated the un-principled Bhūta Existence and settled on it, so that while it carries them, they carry it on, each in its proper place and time Existence, rid of itself, of its assertiveness (ahamkāra, the principle of individuation, which grows into the all-filling, destructive Āsura-bhāva) becomes the support and covers the extent of the Vāstu, an image of ordered manifestation Vāstu now is its name Its image is that of the Purusa, the place of reference in which man beholds the identity of macrocosm and microcosm On its appeased being and form spread out on the ground he sets up the temple, the monument of his own transformation Its superstructure points to the origin of the primeval descent, it is undone by the ascent step by step, shape by shape, along the body of the temple This body once more, in the concrete form (mūrti), made by art, is that of the Purusa, arisen

[74] In the final rite of Vāstuhoma, the Ācārya circumambulates the fire in honour of Vāsudeva 'Kāsyapasilpa', III 17

# THE GODS AS CONSTITUENTS OF THE 'BODY' OF THE VĀSTUPURUṢA

The Vāstupuruṣa, once laid on the ground, is measured out in squares, from east to west, with the course of the sun, from light to darkness. He is one and omniform; all the possibilities of existence are displayed in the tranquillity of his recumbent state. Each is divine by nature, an essence established at its proper place and has the name of a god. Their sum total is the Asura; their multiplicity is held by their place of reference which is the Vāstupuruṣa, resurrected and transformed. He is the deity 'ab intra', the Asura with his face down, sunk into the ground, and one with it, and resurrected, facing upward with all his powers laid open in their proper place, his hands joined in 'añjalimudrā',[1] in external worship of the Supreme and undivided principle where lies his origin and which he now reflects, its 'image' on the earth. Space and time are its measure and form its body. It is square; similarly, each power or divinity is laid out in squares (pada), their total is the Vāstupuruṣamaṇḍala, of 64 or 81 squares, according to its fitness for Brāhmaṇas and Kṣatriyas. Forty-five Devatās occupy the body of the Vāstupuruṣa; they cover his extent, they are his limbs and vital parts and their sum total is the Vāstupuruṣa with whom it is co-extensive. Their number necessarily is the same in the Vāstupuruṣamaṇḍala of 64 or 81 or any of the other numbers of squares; only the extent allotted to each, differs, but not their relative position in the plan.[2] This allows certain variations also within each of the two leading types. Some of these, found in several texts, are shown on pp. 86-88.[3]

The centre is the place of Brahmā and 44 Devatās are grouped around it. The Brahmasthāna, the nucleus of the maṇḍala, invariably extends over four squares in the Maṇḍūka and over nine squares in the Paramaśāyika plan. It is the root of each Vāstu while the other Devatās hold the ground around it and face it in

[1] In Śaiva tradition, Vāstoṣpati is Īśāna ('Paurāṇika Vāstuśāntiprayoga', fol. 24) sunk into the ground; he is Vāstudeva who dwells at Pātāla (the nether worlds), the upholder of the earth (fol. 25). The Vāstu deva is the Vāstu nāga, the support of all architecture ('Nāgara', see Part VII); he is worshipped as a golden serpent. His double nature, one with the Godhead, unmanifest, is ophidian; manifest he is the God of gods, Īśāna, Śiva, whose image is the bull (vṛṣa). The 'Vāstumaṇḍalavidhi', pp. 146-47, therefore prescribes the installation of the golden serpent, and north of it the Vṛṣa Vāstu, made of gold; (also 'Vāstuśāntiprayoga', fol. 10).

The golden images of bull and serpent represent the twofold nature of the golden image of the Puruṣa. (Re the bull and the serpent, cf. the Greek god Zeus.) As an 'anthropomorphic' image, the Vāstupuruṣa shines like gold, has 4 faces and 4 hands, holds rosary and water vessel, as Vāstubrahmā (cf. the 'dhyāna' of Brahmā, 'Mānasāra', VII. 155-162); in his 'rājasika' aspect he is beheld as ferocious, holding a mace, trident, axe and skull staff; he is red as the rising sun, and like the god of death to his enemies ('Mahānirvāṇatantra', XIII, 63-66). Other images of the Vāstupuruṣa (for inst. 'Prayoga Pārijāta', pp. 94-96, śl. 35) are two armed.

[2] Full squares are meted out in the maṇḍala of 81 squares to each Devatā, whereas in the plan of 64 squares, half squares or isosceles right angled triangles accommodate the entities placed at the corners, along the diagonals, from the corners of the maṇḍala, to the corners of the Brahmasthāna in the centre.

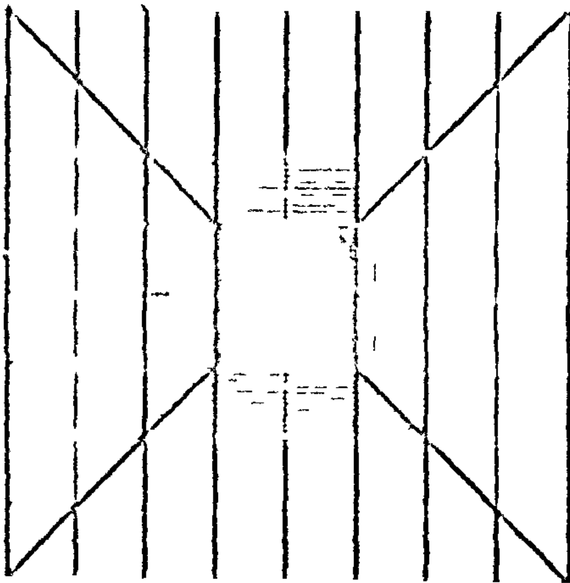
[3] The names of the divinities are given in the Paramaśāyin plan on p. 32; see also Part II, note 30. Paramaśāyin, the 'Supreme Recumbent', denotes the deity 'ab intra'.

two borders, of which the sum is three squares or units wide  Surrounding the immutable centre, the rule applicable to the triple rows around it is that 12 Devatās form its inner rim, the border of the Brahmasthāna, and 32 Devatās are stationed along the perimeter of the Vāstumandala and form its outer rim  The whole of the outermost row is invariably occupied by the 32 Devatās, who are therefore called Prākāra Devatās or Pada Devatās, enclosing the Vāstumandala, or occupying all the squares along its outline  1 + 12 + 32 entities are thus stationed in the centre and around it  Their number and position give their meaning and form the body of the Vāstupuruṣa (Figs 1-7)

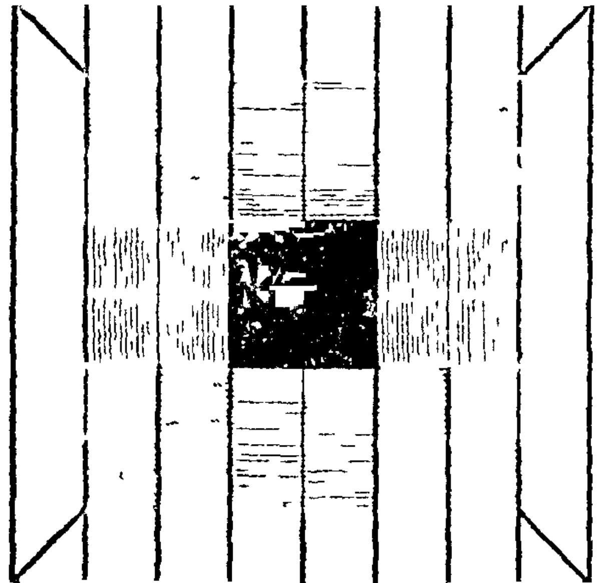
The plots which are assigned to the various divinities are not of equal size, in the various plans  45 entities are accommodated variously in 64 or 81 units  The immutable relation is the proportion between the centre, the Brahmasthāna, and the total square  Fixed also is the number of the 32 marginal gods  It allows one square to each of the marginal gods in the plan of 81 units, whereas a division by the main diagonals, of the squares situated in the corners meets the contingency of distributing 32 in 28, by halving the squares along the diagonals, in the corners

The number of squares assigned to the various divinities varies in the different plans  It makes the demarcation between the two borders a shifting one, now

TYPES OF THE VĀSTUPURUṢAMAṆḌALA[3]



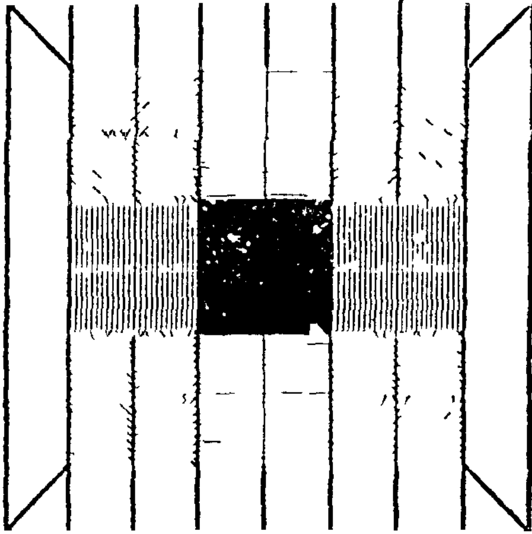
(1) MAṆḌŪKA A
[illegible] V 8-10
Matsyapurāṇa, CCLIII, 47-48
Bṛhat Saṃhitā, LII 55 56
Īśānaśivagurudevapaddhati, Pt III, ch XXVII 4 12
[illegible] XVII 15 17
Samarāṅgaṇasūtradhāra, XI 21-25
Śilparatna, VI 35 [illegible]
Viśvakarmavidyāprakāśa, I 75 76



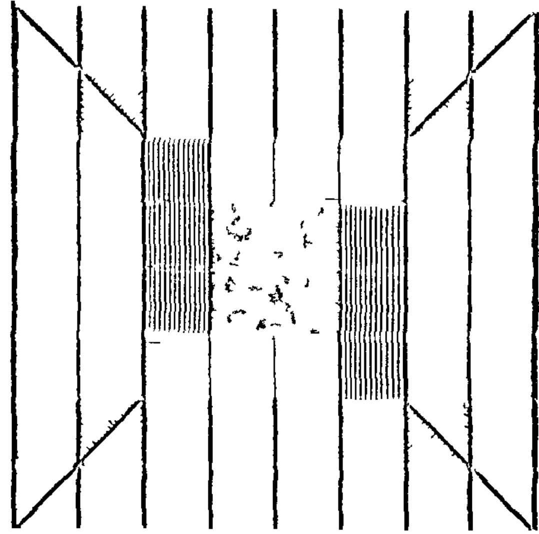
(2) MAṆḌŪKA B
Hayaśīrṣapañcarātra, VIII 150 164
Agnipurāṇa, XL 2-13
Śāradātilaka, III 8-9
Vāstuvidyā, IV 45

[3] The Vāstupuruṣamaṇḍala on p 32 is the Paramaśāyin plan "A"

expanding the outer border (Fig 4) and then again contracted within its limits of one unit's length (Figs 3, 7) or else, some only of the more centrally situated



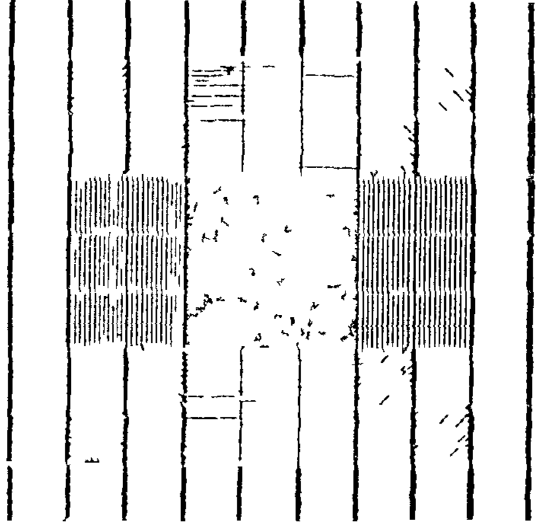
(3) MAṆḌŪKA C
Vāsturājavallabha, II 13
Śāradātilaka, III 8 9



(4) MAṆḌŪKA D
Mayamata, VII 43-57
Vāstuvidyā, IV 36
Mānasāra, VII 83-110



(5) PARAMAŚĀYIN A
Visvakarmaprakāsa, V 54 65
Bṛhat Samhitā, LII 42 54
Matsyapurāna, CCLIII 25-35
Īsānasivagurudevapaddhati, III ch XXVII 35
Mānasollāsa, II ch III 1 73-87
Visvakarmavidyāprakāsa, I 66-70
Paurānikavāstusāntiprayoga



(6) PARAMAŚĀYIN B
Samarāṅganasūtradhāra, XI 1-14
Tantrasamuccaya, I 1 60 67

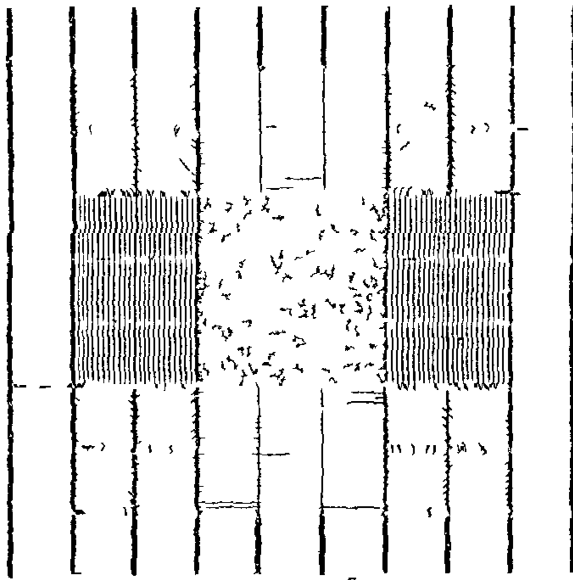
The sources for the drawing of each maṇḍala are noted against it

The black field is the Brahmasthāna Closely set parallel lines show the plots of 4 of the inner divinities whereas the broken oblique lines mark the 8 plots assigned to the eight

'Padadevatās'[79] encroach upon the inner border (Figs 2, 6) The simplest solution is shown in the Paramasāyika plan (Fig 7) and similarly, in the Mandūka plan (Fig 3), its opposite, though analogous application is in the Mandūka plan (Fig 1) All the other plans are more intricate

The total width of both the borders is three units, in either of the two plans The variations affect the inner border of two units width and introduce, proceeding from the centre, in the main directions the following rhythms in the plan of 64 squares

1 1 2, 1 2 1, and in that of 81 squares 1½ 1 2, 1½ 2 1, whereas an exchange of rhythms takes place and an addition of further ones towards the corner, in plans like Figs 2, 5 The Brahmasthāna is wreathed by different rhythmical movements They clasp its square and leave it unaffected



(7) PARAMAŚĀYIN C[80]
Mayamata, VII 58
Agnipurāna, XCIII 31
Visnusamhitā, XII 52-60
*Īśānaśivagurudevapaddhati*, Pt I ch XI 40
Kāmikāgama, XVII 48-50
Kāśyapaśilpa, II 2-10
Vāsturājavallabha, II 13
Śilparatna, VI 45-46
Mānasāra, VII 110-125
Prayogapārijāta, Vāstuhomavidhi, 3-14

Brahmā in the centre is one, he occupies the position from the heart to the belly of the Vāstupurusa, the Brahmasthāna in the Vāstu is the vital centre, in and around which are the Mahāmarmas, it is the equivalent to the Brahmapura, in man, the microcosm ('Chānd Up' VIII 1 1)[81] The place of realisation of

further "inner divinities" The areas occupied by the 32 outer divinities, the Padadevatās, are left blank

The 'Śāradātilaka', III 8 comm gives the meaning of Mandūka, the Yogapītha, its description however is not given in detail, Mandūka B or C would answer it

The same names are given of the East-West and of the South-North lines (sirā=sirā) in the 'Viśvakarmaprakāśa', V 22 f and the Br S Comm, cf p 54

[79] The divinities who are meant to occupy one Pada (square) only of the outer border

[80] A further variety of the Paramaśāyin plan is prescribed in the 'Tantrarāja-Tantra', XXX 11-14 The 4 main inner divinities occupy 3 squares each, and the remaining 8 inner divinities, 2 squares each

The 'Mahānirvānatantra', XIII, 49, prescribes as mandala for the worship of the Vāstupurusa, a square of one cubit side length, with a lotus in the 4 central squares and the 12 followers of the Vāstudaitya around it This square of 16 units is similar to a Rāśicakra

[81] The images here are similar though not identical, cf the lotus in the 'city of Brahman' The lotus, symbol of manifestation, is also drawn in the centre of the Vāstumandala

the Supreme Brahman, the centre of the Vāstupurusa, is assigned to Brahmā who is the effected (kārya) Brahman, this is the subtle state of manifestation which in ontological hierarchy is prior to manifestation The place of Brahman (Brahmasthāna) corresponding to Brahmapura in the universe is the Hiranyagarbha, the Embryo of Splendour, the primordial germ of cosmic light[82] Similarly, from the Brahmasthāna proceeds the light of all times and in every direction, this makes the first belt, the inner border of 12 entities In the outer rim of 32 entities it is marked at each place at its definite time and encompasses the extent of corporeal manifestation

The centre, the place of the unconditioned Brahman, is represented by Brahmā, the Regent of that place Radiating from the centre is its effulgence, the light of all suns that ever shone and which in repeated cycles illuminate this universe This light of all suns is carried by the Regents of 12 Suns, the Ādityas Their names are given In name, it will be seen, they reduce themselves to 8, their Vedic number, four of them, in the corners, appearing in 'pairs'[83] The other four occupy one full side each of the Brahmasthāna, or surround it altogether The light is carried across this inner border and to the outer rim with its four orients in the middle of each side In the centre is the dark source of all light, the superluminous darkness, the central point beyond all time, located in the square ($2^2$ or $3^2$) of the Brahmasthāna, it radiates from there and its radiance proceeds through all the stations of the Regents of sun and stars, placed on the body of the Vāstupurusa which is the square Vāstumandala From the centre beyond time, and around it, is displayed cyclical time in its sections, in its units of days, months and years and in the cycles in which the different courses of sun and moon are adjusted Laid out around the Brahmasthāna, collateral with the centre, all these times are simultaneous, in one duration, supernal time But in the outer border, proceeding to the right (pradaksina) the succession of time is parcelled out in the stations of the Regents of the Naksatras, etc, their houses are in the squares of the outer rim

Of the 12 inner divinities, Aryaman, Vivasvān, Mitra and Mahīdhara are assigned large plots, on the four sides of the Brahmasthāna, beginning from the East[84], whereas pairs of divinities, Savitr and Sāvitra, Indra and Indrajaya, Rudra and Rudrajaya[85], Āpa and Āpavatsa reside at the corner squares, or their halves

('Mahānirvānatantra', XIII 54), Brahmā issues on a lotus from the navel of the Puruṣa This is the place of 'Brahmanātmasambhava' ('Tantra-Samuccaya', I 1 62) The Brahmasthāna lies between the heart and the belly of the Vāstupuruṣa, this is the 'dasāngula' (Śankarācārya on 'Śvetāsvataropaniṣad', III ) from the navel, the seat of 'manas' (mind), to the heart, the seat of 'buddhi' (intellect) in man, the microcosm

[82] In relation to Brahman, the Supreme Principle, the diagram of the Vāstupuruṣa as ontological symbol, is equivalent to Virāj, the central squares corresponding to the Hiranyagarbha

[83] Proceeding to the right, with the sun, the sequence of the orients is from East to South, etc See also note 86

[84] The 'Īsānasivagurudevapaddhati', l c, puts Marīci in place of Aryaman Marīci is Light, Ray of Light, Radiation, cause of all activity Marīci is a mind-born son of Brahmā, his son is Kāsyapa, whose son is Mārtānda

[85] The 'Brhatsamhitā' places Rājayakṣman for Rudrajaya, similarly the 'Garudapurāna', I XLVI 9-11 see Part II note 30

from the south-east corner onward The four corner divinities, but for those in the north-west are procreatively related and conduct from the inner to the outer rim the light which comes from the centre[86]

Aryaman is yonder sun ('Taitt Samh', II 3 4 1), Vivasvān is Mārtānda, the mortal form of Brahman, whom "Aditi bore hitherward into repeated birth and death" (RV X 72 9), Mitra, the Sun, is an Āditya[87] and Mahīdhara or Prthivīdhara, "the upholder of the earth", is Ananta ('Samarānganas', XIV 11-31) who is Visnu[88], the Sun, and all it brings to light Visnu as Ananta, the Serpent, supports the universe on his head ('Visnupurāna', II V), from below he upholds the earth, the level from which the temple rises It is here then that the Vāstupurusa, the existential Purusa, has his identity most fully established by the likeness of the Yajña-purusa, who is Visnu (yajñamūrti, Ś B I 2 5 1-6) Vāstu is also Dhara, the upholder of the earth, and in this function he is one of the 8 Vasus ('Bhāgavatapurāna') who cause the world to abide (vas), so that in Mahīdhara, north of the Brahmasthāna, the Vāstupurusa is most firmly fixed in his nature[89] It is here that he is most firmly set and presided over by Visnu who, according to Tantra, is the Regent of the 'below' just as Brahmā whose place is in the centre is the Regent of the 'above'[90] In the Vāstu, the diagram of the hierarchy of manifestation and of its ordered existence, the vertical direction is symbolised in the centre, where the 'above' is projected from Mahīdhara to Brahmā Along this vertical axis, Śiva stood when the goat-Asura fell down at his feet

The sun in the intermediate directions carries the light from the centre to the corners Savitr stationed in the south-east, is the sun (Ś B VI 3 1 19),

[86] The couples of Ādityas here are not to be taken as being born in pairs The second name of each pair has no place among the Ādityas, nor independence It is a hypostasis of its leading name This is made clear by the identifications of the names of the Devatās, in the 'Samarānganasūtradhāra', XIV 11-31 The Vedic number of the Ādityas is 7 or 8 (RV X 72 8) Two and two sons were born of Aditi, in addition to the 8 sons of Aditi, the Rudras, Vasus, Maruts, etc, are also designated as Ādityas In the Ś B XI 6 3 8, 'Br Ār Up', IV 9 5, and in general later acceptance the number of the Ādityas is 12 They are known generally as presiding over the 12 months of the year, Dr Shamasastri, 'The Āditvas', 'Indian Antiquary', Vol XLI p 290, and in 'The World Cycle', JISOA, vol XI p 117, considers them as lords of the intercalary months in a cycle of eclipses

[87] The two Ādityas, Mitra and Varuna, are located in the Vāstu close to each other As Mitra means life which the sun gives, so is Varuna here its dark side, with its potentialities of decay and disease

[88] 'Īśānasivagurudevapaddhati', III ch V 9

[89] In a peripheral sense, Ananta or Śesa, is the Vāstunāga, the "serpent of the site", who moves around every building site In this concept, the movement of the Vāstunāga is associated with that of the Vāstupurusa, as Caravāstu or movable Vāstu, underlying buildings, etc, which are used for temporary purposes, such as serve in the performance of a definite rite, or for the houses of men For such purposes, time as movement encompasses the extent of the Vāstupuruṣa and makes him revolve along with it ('Vāstuvidyā', VII 2 6, and 'Bhubanapradīpa', IV-XII, transl by N K Basu, in 'Canons of Orissan Architecture') In the latter work it is enjoined that the body of the snake being divided into 8 (or 9) equal parts, head, heart, stomach, navel, knee, chin, ankle and tail, the foundation stone should be placed at the heart or stomach, the door also is to be placed at the heart or stomach of the serpent

[90] I P Part III ch XXVII, 71 f

the Impeller Sāvitra—"inasmuch as Savitr saw them they are called Sāvitra" (Ś B VI 3 1 1)—is the body of libation-mantras, or the mother of the Vedas, according to the 'Samarānganasūtradhāra' In this text, Savitr is equated with Gangā Gangā is the celestial current (pravāha) of all the Śaktis, and from this sum total of all Power the 8 Vasus originated ('Mahānirvāna-Tantra', XIII 154) In the 'Rāmāyana' 7 27 34, Savitr is the eighth Vasu

Filiation, or hypostasis of the female principle, associates Āpa, the Āditya of the north-east, with Āpavatsa Āpa, in the 'Samarānganasūtradhāra' is identified with the Himālaya and Āpavatsa with his daughter Umā Indra figures as Āditya of the south-west Indra is also the Lokapāla of the East, placed in the outer border he is there generally called Mahendra, the great Indra, this name however is given to him also as Āditya ('Vāsturājavallabha') Rudra and Rājayaksman hold the position of Ādityas in the north-west

The Padadevatās, the divinities stationed all round the perimeter (viskambha, 'Silparatna', VI 36)[91], are regents of the Naksatras and are led by the warders of the four regions of space, the Lokapālas[92] Mahendra in the east, Yama in the south, Varuna in the west and Soma in the north (Sāyana on AV I 31 1) They are stationed in the middle of each side whereas the corners are occupied by the regents of the intermediate directions[93] The Astadikpālas, the Warders of the 8 regions are according to the 'Amarakosa', etc, beginning from the east Indra, Agni, Yama, Nirrti, Varuna, Marut, Kuvera and Īsāna In the Vāstu, Kuvera figures under Soma's name as Lokapāla of the North[94] Īsāna however does not appear in all the treatises as the regent of the north-east Agni holds this position in most of the earlier texts[95]

The East is the quarter of the gods and they are led by Agni[96] (Ś B III 1 1 7, 'Tait Samh' I 8 7 1) and are "Agni eyed" (Ś B V 2 4 6)

[91] Viṣkambha is used here in its two fold sense, as the central mass of light and the perimeter of the square place

[92] The Lokapālas are called Vāstudevatās by the Jainas

[93] Ādityas and Lokapālas, Vasus, Rudras and Maruts have all sent their representatives to settle in the Vāstu Their specific function there, as Āditya and Lokapāla, etc, is shown by their position Ādityas moreover are also regents of stars (nakṣatra), the houses of the moon, the star of Aryaman is Pūrva Phālgunī and that of Mitra, Anurādhā Mitra at the same time presides over the winter solstice—The names of the Ādityas are variously given in the later texts

[94] This is according to the list of identifications in the 'Samarānganasūtradhāra', where the necessary substitution of Soma is made in the adjacent field, for Bhallāṭa, the holder of the crescent, Śiva—'Manu Saṃhitā', V 96, enumerates both, Kuvera and Soma In Vāstu-Śāstra, Soma, Kuvera and Bhallāṭa Soma, are neighbours in the middle of the northern side, they are adjacent aspects of one entity Bhallāṭa-Śiva corresponds to Īsāna-Śiva in the north-east corner

[95] Īsāna is not included in the enumeration of Lokapālas in the 'Manu-Smrti' Indra, Agni, Yama, Sūrya, Varuna, Vāyu, Kubera, Soma

Vāstu-sāstra adds Īsāna-Śiva in the north-east and assigns the middle of the north to Soma-Kuvera and to Bhallāṭa-Soma Śiva Īsāna is one of Agni's nine forms Vahni (Agni) is Hara (Śiva) according to 'Samarānganasūtradhāra', 1 c

[96] Agni (Sikhin) is the regent of the north east according to Brhat Saṃhitā, LII 43, 'Matsyapurāna', 'Kāmikāgama', 'Samarānganasūtradhāra', 'Tantrasamuccaya', 'Visvakarmavidyāprakāsa', etc

Where Īśāna is stationed in the north-east, Agni is stationed in the south-east The one or the other corner of the east, is assigned to him in the Vāstu, but the cardinal point is held by Mahendra and by Āditya (Sūrya) Īśāna is a form and name of Agni (Ś B VI 1 3 17), Īśāna is the sun with its rays Therefore Īśāna is lord of all the quarters (AV XV 1 5), and is stationed particularly in the north-east, the most auspicious of the intermediate regions Īśāna is an Āditya as is Parjanya, adjacent to him in the east, Jayanta and Mahendra, the Lokapāla of the east, and next to him Āditya, who is Sūrya, the Sungod, Lord of Planets [97] They constitute the potency of Agni as the Celestial Fire in the quarter of the gods, it radiates forth in the names and the presence of many suns

The remaining divinities in the east are some of the 'sparkling gods', the Vasus, they are the activity of the light on earth, they cause the world to abide, others are the forms, under which it abides, cosmic order and Righteousness, Dharma, and Desire, Kāma The functioning of celestial light (Āditya) and its activity on earth (Vasu) coincide in some of the Padadevatās Indra, the Āditya, is chief of the Vasus, he is the Vasu of the gods (Ś B I 6 4 2), and is the Ksatra (Ś B V 1 1 11), the Regnum on earth Āditya, Lord of Planets, is necessarily also one of the 8 Vasus (Ś B XI 6 3 6) Satya, who is stationed next to him, is Dharma ('Samarāṅganasūtradhāra', XIV 1 c ) the Order of things, his son is Kāma, Desire, likened to the burning flame of fire (Kāma is Agni, A V VI 36 3), placed under the name of Bhrsa (S S XIV 16-17) to the right of Dharma Antariksa, the mid-region, one more of the 8 Vasus (Ś B XI 6 3 6), occupies the next position

The south-east corner is held by Agni where Īśāna occupies the north-east Where Agni is stationed in the north-east, the south-east corner is the place of Vāyu, Agni and Vāyu are interchanged, each of them being a Vasu Agni (Anila) moreover is the son of Vāyu (Anila) Movement (Vāyu from 'vā', to go, to move) gives birth to fire, the terrestrial fire, Agni as Vasu, and it is in this capacity, as world protector, that Agni is assigned to the south-east (Mbh Ādi 67 18-25)[98]

The South is the region of the ancestors The door to their world is in the south-east (Ś B III 1 1 7, III 6 4 12, etc ) The gods in the south are led by Yama ('Taitt Samh ' I 8 7)[99] Yama, the Lokapāla, the fatal aspect of Agni (Ś B VII 2 1 10), is Death, the son of Vivasvān Mārtānda His filiation is shown in the Vāstu, he is placed by the side of Vivasvān He is flanked by divinities associated with the Ancestors (pitr) and by divinities of evil portent

Īsa (Īsāna) is the regent of the N E according to 'Viṣṇudharmottara', II ch XXIX, v 20 23, the 'Viṣṇudharmottara' gives the list of the Pada Devatās twice, the second time, v 24, they are referred to as Stars

97 Parjanya is also one of the nine forms of Agni (Ś B VI 1 3 15) He is the youngest of the Ādityas ('Harivamsa') Jayanta, according to the 'Samarāṅganasūtradhāra', l c, is Kāsyapa, father of the Ādityas

98 The Vasus are Fire, Earth, Wind, Air, Sun, Heaven, Moon, Stars (Ś B XI 6 3 6) and under corresponding names in the 'Mahābhārata, Purāṇas' and 'Amarakoṣa' Agni, Anila, Dhara, Vāstu, Āpa, Anila, Prāṇa, Pravāsa, Vibhāvasu, Arka, Savitṛ, Visnu, Doṣa, Pratyuṣa, Soma, Drona, Dhruva

99 Ś B VIII 6 1 17 connects the south with Vāyu Here as elsewhere, the cosmology of the Vāstu is a condensed 'residue' from the several descriptions

Nearest to the south-east corner, is Pūsan, the Asura (RV V 51 11) and Āditya (RV I 42 1), he is the lord and guardian of roads (RV VI 49 8), the shepherd of the universe who never loses an animal (AV XVIII 2 54) and who gives prosperity (Ś B III 1 4 19) So Death is introduced by Pūsan, the Psychopompos

At the end of the southern quarter, in the south-west reside the Pitrs, the Fathers ('Br Samh ', etc ) or Nirrti, who is destruction, decomposition, the exit from life (AV I 31 2, XIV 2 19, Ś B V 2 3 3) Between Pūsan and Nirrti, Yama is flanked by Vitathā who is Adharma, the negation of Dharma, necessary as its opposite, an attendant therefore of the Sun who shines on good and evil Nirrti's husband is Adharma, her son is Bhrngarāja Grhaksata who is Budha (Mercury), and Gandharva who is Nārada[100], messenger between gods and men, and who promotes discord between them, are the lesser gods in the south, the region of the Fathers and of Death Mrga (Capricornus), the solstitial door of winter corresponds to the north in the year, but to the south with regard to the course of the sun in the sky[101], Mrga here has the aspect of Ananta, the Serpent, adjacent to Nirrti in the south-west corner, he points, 'pradaksinā', towards the west, the quarter of Serpents (Ś B III 1 1 7) The ophidian character, in the west, of the deity 'ab intra' is cast off in the region of Soma, the sphere of formation until the station of Īśāna is reached in the north-east

Varuna, the son of Aditi (RV X 72 8), is the protector of the West When contrasted with Mitra, the non-proceeding Varuna is the power of darkness[102] He is identical to the dread form of Agni This Agni becomes Varuna in the evening, in the morning, rising he becomes Mitra (A V XIII 3 13) In the Vāstu, Varuna rules in the West, over the outer border, whereas Mitra's place is next to the centre, contiguous with the Brahmasthāna The road leads, in the outer rim, along the dark west, to the north, the quarter over which rules the Moon, which is the quarter of men (Ś B III 1 1 7, III 6 4 12)

Among the acolytes of Varuna, Śosana, 'Drying up', and Pāpayaksman, Consumption, are constant evils The afflictions that proceed from his inauspicious aspect go as far as the north-west corner, where Roga is stationed, he is Disease, the Shortener of life (anāyuṣ, 'Visnudharmottara, l c ) according to that branch of the tradition to which belong the 'Brhatsamhitā', and other texts Śosana, Emaciation and Withering up, is Saturn (Sanaiścara) and his saturnine agent is Pāpayaksman, Consumption [103]

Dauvārika, the Gate-keeper is Nandin, and Puspadanta, the flower-tusked, is here Garuda[104] and they are the Vāhanas, the former of Śiva, the latter of Visnu

[100] The identifications of these, and the other gods, are given in the 'Samarāṅganasūtradhāra,' XIV 11-31

[101] R Guénon, 'Le Symbolisme du Zodiaque chez les Pythagoriciens', 'É T' 1938, pp 224-230

[102] Coomaraswamy, 'Angel and Titan', l c, pp 379, 409

[103] Pāpayakṣman, the curse of consumption, had been brought on Soma, the Moon, by Dakṣa Its position, in the Vāstu, borders in the west on the realm of Soma Śoṣana and Rājayakṣman as aspects of Varuna, 'Jaiminīya Upaniṣad Brāhmana', IV 1 7 8

[104] According to 'Samarāṅganasūtradhāra', Puṣpadanta is also one of the Diggajas, the 8 elephants on which rest the eight regions ('Amarakoṣa')

In the Vāstu they are stationed on either side of Sugrīva, who is Manu, son of Vivasvān Mārtānda and brother of Yama Manu is the primordial and universal law-giver, the prototype of 'man' (Manu, Mānava) His place is midway between Nirrti and Varuna, whereas next to Varuna, Asura is stationed, whom the Visnudharmottara (l c ) designates as Yaksa This great and principal power is Rāhu The 'Hayaśīrsapañcarātra' (VIII 156) names it Ardha-Vastu, it is the other half, where Existence, Vastu, is the one half Its station in the Vāstu-mandala however is but one amongst the 45 Vedic divinities Vāstu is extension, Rāhu is duration The two are brothers "The wife of Kāśyapa gave birth to two sons Rāhu and Vāstu, the head of the former was cut off by Visnu and the latter was laid low on the earth by the gods" ('Śāradātilaka', III 2 Comm )

The North of the Vāstu is protected by Soma, who is the Lord of Naksatras and Vasu, Lokapāla and Āditya in one This is the region of the birth of form, here the serpents emerge, Nāga who is Vāsuki, and Argala who is Bhujaga having cast their skin, Soma-Kuvera is the Lord of wealth, Soma, the Moon with the lance of his rays is Bhallāta, they are flanked by Mukhya on the one side and by Aditi and Diti on the other Mukhya is Viśvakarman, the maker of all form, who is Vidhātā, Aditi, the boundless, and Diti, the bounded, are both wives of Kāśyapa, who is called Jayanta in the Vāstu, the one is the mother of the Ādityas, the other of the Daityas, production 'per artem'—Viśvakarman—and by nature Aditi and Diti—occupy the north, the region of Soma, pradaksina-wise between the regions of death and life, west and east They are all connected, follow one upon the other, as stages of realisation, and they remain present in the plan

Outside the Vāstu, in the eight directions, having position but no plots, are stationed homeless presences[105] Śarva-Skanda in the east, Aryaman in the south, Jrmbhaka in the west, and in the north, Pilipiñjā Śarva-Skanda are aspects of Agni, Śarva is the fiery essence in the Waters, Skanda is the ninth form of Agni (Kumāra)[106] or, also he is said to be the son of Adbhuta Agni (Mbh Vana 225 2), Aryaman guards the south and in this position he is the chief of the Pitrs The story of Jrmbhaka (Jrmbhika) is told in the 'Mahābhārata' (Udyoga Parva 9 60-63) He was created by the gods as a great being to destroy Vrtra, for Vrtra had fought with Indra whom he whirled into his mouth Jrmbhika is the Yawn, Vrtra yawned and out leapt Indra From this time on, Jrmbhika is part of breathing The identity of Varuna 'ab intra' with Ahi-Vrtra is confirmed by Jrmbhaka, being stationed in front of the side of the Vāstu which is ruled over by Varuna, and outside it, like his yawn itself and carried there by breath (asu), the breath of the Asura who is Varuna and also Rāhu, placed outside, a sign of fatigue and relaxation in which is release "from the jaws of the monster" Pilipiñjā in the north, incites the Moon (pil-piñja), the Protector of the north, to the continual shaping of living forms

[105] For the worship of Hari (Viṣnu) and Durgā, the 45 Devatās have to be worshipped For the temple of other divinities, the eight outside divinities have to be added ('Tantrasamuccaya', I 1 68 69), the four on the sides and the four in the corners (see p 32)

[106] Ś B VI 1 3 11 Śiva as Śarva presides over the east, (AV XV 5 2), Śarva is one of the eight manifestations of Śiva Skanda is Śiva's fire born son, 'Kumāra', the boy, 'Guha', the mysterious

This continuing procedure holds the corner position in the north-east under the name of Carakī (from 'car', to move) The powers stationed in the corners are all female, the driving force that is in each two adjacent sides, is stationed outside, let loose so as to avert such evil as might befall the place by the weaknesses corresponding to its own propensities Vidārī, the Rending one, is stationed in the south-east, Pūtanā, the 'corpse' of a demoness, guards the south-west corner and Pāparāksasī, the evil fiend, is active in the north-west The corner positions are defensive ones The energy (śakti) which is active there is born of the meeting of two different directions, each with its own impulse This is discharged at the corners to combat an assault from evils akin to itself in nature

The outside entities on each side, on the other hand, are exponents of the nature of each of the sides, it would be dangerous to leave the Vāstu so exposed It is defended at the corners, at the turning points, by the demonesses who have come out of it and who, by remaining outside, defend the order of existence against disruption and decay

Viewed from the centre, where Brahmā is stationed, the twelve inner and thirty two outer gods have their place in due order, it is assigned to them by a two-fold movement, from the centre, in expanding rhythms, and around it, peripherally Their number, forty-five, is not a square one, their plots are allotted to them according to various patterns consistent with their importance and position Only the Brahmasthāna remains unchanged as square power of two, and square power of three respectively, in the Vāstu of 64 or 81 squares It is there that the Supreme Brahman is worshipped, in the centre of the Vāstu's body The size of the fields occupied by the 12 Ādityas[107], who are actually only eight —their Vedic number—is variable Their presence all around the Brahmasthāna is equal to the total effulgence, the light that proceeds from the Hiranyagarbha, the golden Germ Of the 32 marginal divinities, eight preside over the regions of space (astadikpāla), while all of them are at the same time the regents of time, measured by the stars, over which they preside The number 32, or four times eight, is derived from the original 4, which again is a repeated application of the balance of the primary binom of polarity, as seen in sunrise and sunset, east and west In these $4 \times 8$ units or fields, the $4 \times 7$ regents of the 28 lunar stations are accommodated Their number, 32, is incomplete however without the central one of Brahmā, from whose immovable position proceeds all display and number Added to it, their number is thirty three, which is the number of the gods, their sum total in the unity from which they proceed and have their play in heaven, on earth, and in mid-air[108] By these 33 the sacrificial body (yajñatanu) of the Vāstupurusa is occupied in its centre and periphery

The Vāstupurusamandala, sacrificial body of the fallen Asura, is analogous to the ritual body which the sacrificer builds for himself when piling up the Vedic altar It is one in kind and function with the 32 bricks, 8 in each quarter and one in the middle, called Yajñatanu (Taitt Samh IV 4 9) The sacrificial body

[107] See Figures pp 32 and 86 f , and note 86

[108] The 33 gods of the Āpri hymns of the Rgveda are three times eleven, on earth, in the air and in the sky Residing on earth their number is equal to $4 \times 8 + 1$

of the Vāstupuruṣa as the dwelling of the 33 gods is one with the town Śrīkṣetra, with its 32 doors[109].

Brahmā is always stationed in the middle of the body of the Vāstupuruṣa[110], whether the latter lies with his head in the east ('Mayamata', 1. c., 'Śilparatna', VII. 34, etc.) or as is more general with his head in the north-east[111]. If he lies with his head in the east, this is its original place, towards the rising sun. It is then said that Aryaman is stationed there, Vivasvān and Mahīdhara occupy the right and left side of the body and Mitra is placed on the sex organ; on his arms and legs are stationed the pairs of Ādityas in the intermediate directions. In this position, Vāstupuruṣa is said to lie huddled up (nikubja) underneath the gods; the Padadevatās appear closely stationed around him; he is hedged in by them. He underlies the Brahmasthāna and the zone of the Ādityas; he is surrounded by the Aṣṭadikpālas and the orbits of the sun and the moon. But, if his head is in the north-east, at the feet of Śiva and where Īśāna is stationed, all the 45 gods dwell on his body; Īśāna or Śikhin on his head; his eyes and mouth are held by Parjanya and Āpa; on the chest, to the right and left, are Aryaman and Mahīdhara, whereas Mitra and Vivasvān occupy his belly; his feet are in Nirṛti; he lies from the north-east to the south-west; his arms are stretched south-east and north-west and bent in the elbows; his knees too are bent so that they touch the middle of each side of the square; the knees, where Gandharva and Kusumadanta are stationed, are in the south and west; the sun and moon are on his arms (I. P.); they are folded back, so that the hands (palms) come to lie in Rājayakṣmā, the left, in the north-west, and in Savitṛ, in the south-east, the right one (Br. S.) or alternatively the palms are folded on his chest ('Agni Purāṇa').

Right and left refer to the body of the Vāstupuruṣa fallen, with the head down. The divinities of the east and south are on the right, those of the west and north on the left. Their positions remain unaffected by the orientation of the Vāstupuruṣa, and they are distributed on his intrinsic form, which is the square (caturākṛti) and not on the allusion to the figure of man, which latter acts as a place of reference. The divinities are stationed at definite places of the square form; this has the result that the same divinity is placed once on the head and then again on his chest, to the left, according to the position of the Vāstupuruṣa who faces east or north-east. The Devatās reside on the square form of the Vāstupuruṣa and by implication only on his fallen shape. It is the form of the

[109] Cf. also the lotus of Ākāśa with its thirty-two petals. Mus, 'Barabudur', op. cit., p. 701 f. The symbols of Śrīkṣetra, Ayodhyā, and the Vāstupuruṣamaṇḍala are plans in which manifestation is laid out, with reference to the Principle beyond it, and in its centre.

[110] 'Mayamata', VII. 49; 'Bṛhatsaṃhitā', LII. 51.

[111] The majority of texts place the Vāstupuruṣa with the head in the north-east; 'Bṛhat Saṃhitā', LII. 51; 'Matsyapurāṇa'; 'Vāstuvidyā'; 'Samarāṅgaṇasūtradhāra'; 'Kāmikāgama'; 'Mayamata'; 'Īśānaśivagurudevapaddhati'; 'Hayaśīrṣapañcarātra'; 'Samarāṅgaṇasūtradhāra'; 'Kāśyapaśilpa'; 'Manuṣyālayacandrikā', II. 28, etc. (see notes 45, 46). In some of them, the alternative position, with the head in the east is described in detail ('Mayamata', 'Śilparatna') and quoted as the opinion "held by others". In other texts, the two possibilities are not kept apart; they are combined in the 'Vāsturājavallabha', II. 1-2, where the Vāstupuruṣa is described as placed by the gods on the ground with his face east. The feet should be worshipped in the south-west; the head in the north-east; cf. also 'Mānasāra', VII. 255.

Vāstupurusa which has a given number of spines, veins and vital points are held together by these lines of which the prototypes are measurable in terms of breath, 'Prāna' and 'Vāyu' (p 51) As in man whose "inner self, which consists of breath, has also the shape of man", so conversely this form, which consists of breath is named Purusa The form has been laid out on earth at the end of the Perfect age, the Krta-yuga, when the 'Gale of the Spirit' still blows, as Prāna and Vāyu which are the threads (sūtra) that hold it together "The stronghold (pur) doubtless is these worlds, and the Purusa (Spirit) is he that blows here (the wind), he bides (sī) in this stronghold (pur), hence he is the Purusa" (Ś B XIII 6 2 1)

The gods are settled on the Vāstupurusa The fight between the demons and the gods is over for it is won conjointly Every building activity means a renewed conquest of disintegration, and at the same time a restitution of integrity so that the gods once more are the limbs of a single 'being', of Existence, at peace with itself

# IV

# THE SUBSTANCES OF WHICH THE TEMPLE IS BUILT

अथाषाढामुपदधाति । इयं वाऽषाढा । इमामेवैतदुपदधाति ।

"He then lays down the Invincible Brick The invincible one being the earth, it is this earth that he thus lays down "

'Śatapatha Brāhmana', VII 4 2 32

अव्यङ्गे चाक्षते पूर्णे मुनेरङ्गिरस सुते ।
इष्टके त्वं प्रयच्छेष्टं प्रतिष्ठां कारयाम्यहम् ॥

"O daughter of the sage Angiras Thou unbroken, unhurt and full in size, O Brick, grant thou the desired object —I now instal thee "

'Agnipurāna', XLI 17
'Hayasīrṡapañcarātra', XII 257-8

# IV

# THE SUBSTANCES OF WHICH THE TEMPLE IS BUILT

## BRICK

A large number of stone temples are preserved[1] though few brick temples[2] In some the substances are combined, wood or stone for example being used for the door frames of brick structures[3], or stone being employed for the walls and

[1] They are built of the stones which are quarried in the various parts of India , sandstone prevails in central Indian temples , limestone or marble is frequent in western India , trap in the Deccan , a fine grained, black chloritic schist in the later Cālukya temples of the Kanarese districts in the Deccan , a similar stone, quarried in the Rajmahal hills is also used in Bengal for door frames, etc , of brick temples , granite in south India , laterite and sandstone, etc , in Orissa The earliest stone temples are preserved from about 400 A D In Gujerat and Rajputana the stones were carved, pieced together and placed in position In the Kanarese districts and the Deccan the details, in some cases were carved in situ In Orissa, the carvings were finished in situ On the walls of the hall of the Rājarānī temple in Bhuvanesvar, the design is blocked out and has not been completed

[2] The 'Matsyapurāna', Ch CCLXIX, describes the possible forms of the Hindu temple (see Part VII) and says that they may be built either of wood or brick or stone

Utpala, commenting in the tenth century on the 'Brhat Saṃhitā' (LII 39 41), quotes Hiranyagarbha , according to him the range of substances used in definite types of buildings was large The building Mandira, was made of stone, Vāstubhavana of baked bricks, Sumanta of unbaked bricks, Sudhāra of mud, Mānasya of wood, Nandana of bamboo, Vijaya and Silpivikalpita of [tent] cloth, Kaṭima of wattle and others of gold, silver, copper, iron, lac and tin According to Maya there are only five kinds of buildings of different substances

In the early eleventh century, the 'Samarāṅganasūtradhāra', XLIX 6-7, speaks of the Prāsādas which should be built in towns (nagara) They are to be built of stone and baked bricks In chapter LIX 217-239, details are given of the wooden temple Harmya, the rock-cut temple Lavana, the cloth made temple Paṭṭisa, etc

In the 'Īśānaśivagurudevapaddhati', Part V Ch XXXII 86 89, about the same time, the South Indian type of temples is said to be 'samcita', 'asamcita' and 'upasamcita' according to its 'density', and is considered male, female or neuter, respectively In the first instance it is built of stone or brick, in the second of brick or wood, and lastly of brick and wood combined These terms however have a much wider meaning in other southern texts, such as 'Mayamata', XX 31 f and the 'Mānasāra'

[3] Among the earliest of preserved brick temples are the temple at Bhitargaon, in the United Provinces, of the Gupta age (5th century) , the Uttaresvara and Kālesvara temples at

brick for the superstructure[4] Brick and wood, singly or combined, were it seems frequently used but being easily perishable have vanished to a much greater extent than the contemporary buildings in stone Wooden temples are however even now preserved and in worship in two distant parts of India, namely in Malabar, the ancient Kerala, and the Himālayas[5]

Bricks had formed the "body of the sacrifice" (yajñatanu)[6] Detailed prescriptions are given how to make good baked bricks[7] and this practical knowledge gained by experience accompanies a sacred memory (smrti), a tradition by which the acquired technical skill became perfected

The act itself of offering had gone into the making of the brick It is a rite of identification The substance of the brick is its carrier, earth and fire are the

(Tagara) Ter in Hyderabad, Deccan , their doors, beams and ceilings, are of wood (about 7th century) , the Lakṣmana Temple in Sirpur, Central Provinces, 7th century, the door frame being of stone (Coomaraswamy, 'History of Indian and Indonesian Art', Pl LI) Among Buddhist temples, the outer circular brick wall and the inner circle of wooden pillars of the temple at Bairat, Jaipur State, Rajputana, date from the 3rd century B C (D R Sahni, 'Archæological Remains and Excavations at Bairat', Jaipur 1937 , Stuart Piggott, 'The Earliest Buddhist Shrines', 'Antiquity', 1943, pp 1-10) The temple at Paharpur, North Bengal (Memoir, ASI No 55, by K N Dikshit) rising with 3 terraces on a cross shaped plan with recessed sides, of the 8th century (and a similar Stūpa structure unearthed at Lauriya Nandangarh, Bihar, 'Annual Bibliography of Indian Archæology', 1936, p 4)

[4] In South India, the walls of the temple are generally of stone , the flat stone ceiling of the Garbhagrha is supported on teak wood joists , the superstructure is of brick See also note 76 In another combination the structure is of brick and its life-size sculptures are of sandstone as in the ruined brick temple of Rajapadar, Sonpur , (ASI , vol XIII p 120)

[5] The wooden temple at Brahmor, Chamba, (J Ph Vogel, 'Antiquities of Chamba State', p 96) of the early eighth century is the most ancient in the Himālayan group On the Malabar coast, wooden temples represent the indigenous types of architecture , preserved temples date from the 14th century (R V Poduval, 'Administration Report of the Archæological Department', Travancore, 1941, p 4 , the temple at Śāttankulangara, Central Travancore)

[6] 'Taitt Samh ', IV 4 9 Thirty three rhythmic formulæ accompany the bricks called Yajñatanu, 8 in each quarter and one in the middle In their position they correspond to the 32 Padadevatās and the Brahmasthāna of the Vāstupuruṣamandala

[7] The 'Mayamata', XV 114-120 for instance, instructs that soil free from gravel, stones, roots, bones and clods should be selected, having fine sand, of uniform colour and pleasant to touch First one should throw a lump of earth into knee deep water, and then stir and knead it repeatedly forty times with one's feet One should wet it with waters of Kṣīra (pine), Kadamba, Āmra (Mango) and Abhayākṣa tree bark and the water of the 3 fruits (Āmalaka=emblic myrobalan, Bahela and Harītaka) and go on kneading it for a month Then the bricks of 4, 5, 6 and 8 mātras (angulas) in (width) and twice as long respectively and half, or one third, or equal to the given width in thickness, should be thoroughly dried and then evenly baked , after an interval of one, two, three or four months they should be thrown into water, by the expert , thereafter they should be taken out of the water and dried completely, and then used in the desired undertaking

The bricks must be freshly made and all the other building materials too must be hewn or quarried in due time, and used exclusively for the building for which they are destined The 'Mayamata' XV, 61f , 121, enjoins that wood, bricks, and stone should be collected in the approved manner as the ancients have condemned building materials left over from other buildings and those taken from ruined buildings cause distress

The prescription of the 'Visnudharmottara' about the making of bricks is given in Pt III Ch XCI 3-11

elements which take part in it and help the sacrificer to build his sacrificial body. It is made of bricks. It can neither be seen nor known by those who see but a brick in a brick and ignore that its number, measure and position make visible its function in the sacrificial altar, for it is made and put into its position in execution of a sacramental will to which it gives a body. This is piled up physically, while it is imbued with an invisible Essence. The fabric of the altar is of a special kind and with it also are moulded the thick, piled up walls of the Hindu temple.

In the building of the temple, the bricks—it will be shown that also the building stones are thought of in this connection as bricks—are as if pressed from the centre towards the perimeter by the small hollow of the Garbhagṛha, the innermost sanctuary of the temple, massively piled, they are its walls. These now are replete with the special substance of the bricks and they widen the perimeter of the temple with mouldings and fillets in the horizontal and by buttresses and various kinds of projections, in the vertical direction. The body of the temple substantially steps across its own limits, enlarges its perimeter with compact pilasters and turrets, and makes its rhythm proceed from the centre in the oscillations of its elastic boundary. There are many possibilities of the articulation of the perimeter of the temple, each has a name and definite proportions.

The impact of the outward movement is caused from the small internal cavity, the innermost sanctuary. The Vedic Agni was a massive pile with no other cavity than those of the Svayamātṛṇṇās, the naturally perforated stones. Through these perforations the altar 'breathed', the Prāsāda, the main and integral part of the Hindu temple, is nearly a solid monument but for the small space of its sanctuary and such technical devices which lessen the weight of the mass piled above it. It is closed on top. With the inclusion of the small space in the innermost core of the mass, a pressure as it were is exerted on it from within, it impresses itself on the bricks. Acted upon from within horizontally, they appear to discharge it in the outward direction. The pressure acts figuratively and not dynamically or mechanically, for the Hindu temple is more a solid monument than a work of 'architecture'. As in the piled altar, each weight rests on its support, and there is no lateral thrust. The buttresses are not technically indispensable.

A monument stands in space, it does not face it. The Hindu temple too, has strictly speaking no façade, the four orients and the intermediate directions of space step forth in buttresses and images from the body of the temple in a continuous integrity of the mass analogous to the variable pattern in which the divinities are laid out on the Vāstupuruṣamaṇḍala. In the structure of the temple they refer to and have their position, from the central square of the innermost sanctuary, the Garbhagṛha, it corresponds to the Brahmasthāna, in the plan. In this way the bricks partake in the form of the temple which is more a monument than an edifice. With reference to the Vedic Altar it is thus known: "In the fire the gods bathed him (Prajāpati) by means of oblations, and whatever oblation they offered that became a baked brick and passed into him and because they were produced from the offering (iṣṭi) therefore they are bricks (iṣṭakā), and hence they make the bricks by means of the fire, for it is oblations they thus make" (Ś. B. VI. 1. 2. 22 f.). The baked brick here is the middle term of the oblation and of Prajāpati, it is the place of its transubstantiation. Similarly, the following are

invoked and beheld in the bricks, when a temple of Śiva is built[8] the subtle body of eight components apportioned to man (puryaṣṭaka)[9], the eightfold manifestation of Śiva (aṣṭamūrti)[10], the Pure Principles, and all the other principles and forms of manifestation (tattva) including the 'impure principles' of the world of duality.[11] The oblation here is man himself in his subtle body, and its eightfold correspondence in the manifested universe. One by one, the lower Tattva is offered to and absorbed in the next higher until the Pure Principles are reached and then merged and re-integrated in Niṣkala Paramaśiva, the Supreme Principle,[12] in whose presence the temple has its ultimate destination.

Through the fire in which it is baked, the sacrificial essence remains burnt into the brick, in its substance, which is earth. This is feminine in its nature, it is the original substance to be shaped, and to be laid down in the piled up monument on sacred ground. It retains its full Vedic meaning in the structure of the Hindu temple for one of the most widely used names for the temple proper, the main and integral building, is 'Prāsāda'. This name derives from 'sādanam' the settling of the bricks in the Fire altar (Ś.B. VI.1.2.28).[13]

They are settled with the Sādanam mantra which makes them lie steady and firmly established ('Vājasaneyī Saṃhitā', XII.53). Each brick made of earth shares in the nature of the earth, is earth. What is required of her, the steadiness, the firmness, is equally necessary to each layer of the monument as it is raised up.

The brick is this earth and the first brick to be laid down anticipates and represents each subsequent one. The first brick is called Aṣāḍhā, the invincible (Ś.B. VI.5.3.1). "The invincible one being the earth, it is this earth that is laid down with the first brick" (Ś.B. VII.4.2.32). "Now this earth is four cornered . . . hence the bricks are four-cornered, for all the bricks are after the manner of this earth" (Ś.B. VI.1.2.29). "The first brick of clay is this earth—whatever made of clay he places on that (altar) that is that one brick" (ib. 30).

When the bricks are laid rhythmic formulae (mantra) are recited to ensure that they lie steady and firm; thus with speech and breath they are laid, their substance is now imbued with Vāk (speech) and with Breath (Aṅgiras, Ś.B. ib. 28). In this way the bricks are Agni's limbs (ib. 31). The brick is Earth and Vāk, for this earth was made first (Ś.B. VII.4.2.32-34) and Vāk is the Word which was in the beginning and is activated into utterance again and again with every brick laid down in the sacred structure. Being Earth and the Word, the brick

[8] The exact analogy in the case of a temple built of stone (śilā) is given in the 'Agnipurāṇa', XCII.32.65.

[9] The Puryaṣṭaka comprises 'Buddhi, ahaṃkāra, manas' and the 'tanmātras: Śabda, sparśa, rūpa, rasa, gandha', this is: intellect, the sense or notion of "I" ness or individuation, mind and the 5 elementary essences or sense principles, hearing, touch, sight, taste and smell. The latter are 'essences' in their relation to the 5 corresponding substances, ether, air, fire, etc.

[10] The eight manifestations of Śiva are: earth, fire, man as sacrificer (priest), sun, water, air, moon and sky.

[11] The Tattvas, the principles and forms of manifestation, are the ontological stages of manifestation of and by Consciousness, of the Supreme Śiva, who is the Supreme Principle, non manifest, without attributes and qualities (niṣkala).

[12] 'Īśānaśivagurudevapaddhati', III, Ch. XXVII.71 f., 'JISOA', vol. IX, pp. 151-165, trans. St. Kramrisch.

[13] Sādanam, from 'sad', to seat or settle, means seat, house, etc.

are deposited below the place where the right door jamb of the main entrance to the temple will be set up.[22]

Five or nine 'bricks' are thus laid down, one in the centre of a square, the others[23] in the cardinal and intermediate directions following the course of the sun (pradaksinā) beginning from the east.[24] They must not be laid on the vulnerable vital spots (marma).[25] The shape of these first bricks is given variously, as square[26] or rectangular that is a double square the thickness being one third or one fourth of the width[27], the latter type prevails. Their size varies with the size of the temple[28]. These bricks then are laid evenly and on one level, into the pit.[29] Then the pit should be filled up[30] and above it, in course of constructing the base of the temple, the rite of Garbhādhāna is to be performed and the vessel which holds the Seed and Germ of the Prāsāda is to be deposited on the ground, on the lowermost moulding (upāna) or on the topmost moulding (prati) of the base,[31] according to the status of the patron, whether he be a Brāhmana, Ksatriya, or belongs to a lower caste. With the status of the donor thus embedded in

slabs which cover the cell foundation. The depth of the wall of the foundation cells is described as 25 feet, its thickness being about 4 feet (Cunningham, A. S. I. vol. VII. p. 172 f.)

[21] 'Mayamata', XII. 110-111. Some say that the first bricks should be laid when two fifths of the pit remain.

[22] 'Kāśyapaśilpa', IV. 46, the first brick should be placed to the right of the door in Prāsāda and Mandapa. 'Īśāna paddhati', l. c. śl. 63.

[23] The rite is described in detail, in the 'Īśāna paddhati', l. c. and in the 'Bṛhatsaṃhitā', LII. 112, 'Visnudharmottara', Pt. II. ch. XXIX. 78 f. (the "laying of the stones" 'śilānyāsa').

[24] According to the 'Vaikhānasāgama', ch. v., called 'Prathameṣṭakā vidhi', (see however 'Bṛ. Saṃh.', 'Viṣṇudharmottara,' etc. l. c., see note 42. According to 'Śilparatna', XII. 26).

[25] 'Śilparatna', XII. 13.

[26] 'Agnipurāna', XLI. 3, with 12 aṅg. width (this is the same as the width of the brick of the Vedic altar, p. 47). The stone bricks measure 1 cubit (hasta). Aṅgula is the width of the upper digit of the thumb, 'Piṅgalāmata', ch. IV. JISOA, vol. XI. pp. 9-31, text and translation by P. C. Bagchi.

[27] For the very best, *i.e.* the very largest, temples the proportion of the 'first bricks' is one cubit (24 aṅg.) long, 12 aṅg. wide and 8 high. 'Īśāna paddhati', l. c., 64 65, 'Śilparatna', XII. 17-18. For the three other classes, the large, middle and least shrines, the height is one fourth of the length, 'Śilparatna', XII, 17-21, cf. 'Mayamata', XII. 104, 'Īśāna paddhati', l. c. 67-70.

[28] 'Mayamata', XII. 104, gives the width in a relative measure, *i.e.* equal to the receptacle of the Garbha. The 'Kāmikāgama', LI. 6, states that the width (vistāra) varies from 3 angulas to 30 angulas increasing by 1 angula. 'Śilparatna', XII. 17-23, indicates sizes ranging from 8 to 38 angulas or from 9 to 39 angulas according to the proposed number of stories of the building and the 'Mānasāra', XII, 189 193, a size from 7-30 angulas, with an increment of 2 angulas. The latter text also admits rectangular shapes of smaller proportions than the double square. The standard proportion is the one indicated in note 27, and considerable latitude was given in the actual measures, according to the exigencies of particular buildings.

[29] Each is placed on the mouth of a 'treasure jar' of copper, 'I. P.', l. c. 71 f.

[30] After once more having been filled with water, then the foundation should be packed with stones or bricks ('I. P.', l. c., 71 f.). This is one method of laying the foundation.

[31] 'I. P.', l. c., 73-74, 'Tantrasamuccaya', II. XII. 6, slightly different and with more detail, 'Mayamata', XII. 107-110.

the temple, the intellectual level is indicated from which he begins his ascent Above this base and this inbuilt distinction of 'level', the ascent is one and the same for all the castes Those who are of no caste, the outcastes and the foreigners, the Mlecchas, they have no ground and footing within the body of the temple and their ascent is from the outside, performed by sight, a 'darsana' to which the highest point is visible from afar The four castes in their hierarchy deposit the seed of the temple at a level which is appropriate to them This distinction is made and remains within the base of the temple only, it does not proceed further Another reference to the status of the donor is given in the designation of the bricks They are distinguished as male and female conforming with the sex of the donor,[32] so that the approach to the identification is more closely adjusted between patron or donor (kāraka, yajamāna) and his gift

[32] 'I P', l c, 67-70, 'Mayamata', XII 105-107, 'Mānasāra', XII 194 195, moreover, distinguish neuter bricks These distinctions are made according to the thickness of the bricks, if bigger at the base, for instance, the brick is declared as female Such slight variations in the standard shape of the bricks are welcomed as indicative of affinities 'Śilparatna', XII 16-17, advises male bricks for men, and female bricks for women donors, or also male bricks for either 'Mayamata', XII 105 f distinguishes the sex of the bricks according to their even (m) or odd (f) number of angulas, etc

## STONE

"Istakā", produced from what was offered (ista, S B VI 1 2 22), is used as the name not only for the brick but also for the stone or wood of which a temple is built "For temples built of stone, the first "bricks" are of stone, for shrines built of wood, they are of wood, or else earthen bricks are employed for all kinds of temples (Vimāna)[33] By its symbolic significance the brick has precedence over stone and wood [34] Stone is used as its substitute The installation however of the first stone (ādhāraśilā) has its own rite, too

Stone temples have no place in Vedic rites Their altars were brick piles and embodied metaphysical knowledge The Svayamātrnnā, the naturally perforated "bricks" in the centre of the Agni (S B VIII 7 3 13, VIII 7 4 1), were most probably a special kind of stone Sheds (sālā) connected with the sacrifice and built of wooden or bamboo posts, beams, a roof ridge (vamsa) and mats, had accessory importance [35] Wood and tree are symbols in their own right Their form has retained its integrity in the Hindu temple even where their substance has been substituted by other more lasting materials, such as brick and stone

The rites of laying the first stone are largely in imitation of those of the laying of the first bricks, the rites connected with the quarrying and the carriage of the stone are akin to the rites of felling the tree and transferring it to its destination Stone, employed in India, as elsewhere from the stone age for sacred purposes,[36] has taken the place of brick and wood in the building of many temples Where it has not retained the logic of its own form, it has also taken over the meaning of their substance To judge from preserved monuments, stone,—the prism, the rectangle and the square—remained in its own pristine architectural form, for several centuries after the temple of aboriginal prototype, the stone dolmen, in worship to this day amongst the Gonds[37] in central India, in the south of India,[38] and elsewhere, had been given relatively large size and careful workmanship The earliest preserved temples of this type date from about 400 A D , especially

[33] 'Hayaśīrṣapañcarātra', XI 234, 'Śilparatna', XII 14-15, 'Kāśyapaśilpa', IV 19 advise stone for the foundation of mixed brick and stone buildings

[34] In domestic architecture, wood and light wood (bamboo), etc , were at least made as much use of as clay and bricks

[35] 'Śatapatha Brāhmana', III 1 1 6, Sāyana, on 'Taitt Saṃh' I 2 1

[36] Dolmen, etc , see Part V

[37] P C Mukherji, 'Report on the Antiquities in the District of Lalitpur, Roorkee, 1890

[38] "Often a large rough stone with no carving on it is stuck up and serves for shrine and image alike" Whitehead, 'The Village Gods of South India', p 35 The shrine of Poleramma, ib Pl XV has one large flat stone, its roof, supported by several upright flat stones and is practically a dolmen , Pls V and VI , ib are further varieties of the Dolmen type , the monolithic uprights are replaced by courses of smaller stones (Pl V) The shrine of Poshamma, Pl IX , is a more complex temple of this type, a hollow cube, with a separate door frame, and a number of large flat stone slabs are laid in the shape of a recessed pyramid on top of the flat roof It is surmounted by a finial See Part V, notes 53, 55

in central India Their unadorned walls consist of a few courses of relatively large stones dressed to level beds and joined without mortar, their roof of stone is flat

From the sixth century A D onwards, the time of the compilation of the earliest preserved treatises on architecture, stone is one of the accepted materials [39] It has its ritual which is partly identical and partly analogous to that of the bricks, a well defined destination, and due consideration is given to its own nature [40]

The 'Matsyapurāna' (CCLXVI, 5-18) speaks of the Brahmasilā, the Brahma-stone,[41] and its consecration The Brahma-stone forms part of the 'support' (ādhāra), of the temple to be built

The 'Visnudharmottara' (Pt II ch XXIX 78), describes the laying of the first stone (silānyāsa) A stone jar should be placed in the centre of the Vāstumandala of 64 squares and the stones, anointed and covered with cloth should be laid down, following the course of the sun, and beginning from the north-east [42] The 'Brhat Samhitā', LII 112 also describes the laying down of the stones they are to be known as goddesses The 'Vaikhānasāgama' (V) regards the four stones as the four Vedas They should be laid in the 4 directions beginning from the East

[39] Brick, and also stone were used and are preserved in the sacred buildings and their accessory parts, in the third, and the second and first centuries B C respectively

Lithic in its construction and not only in its substance is the solid stone fence unearthed in Besnagar, Bhopal It belonged to an "Uttama Prāsāda" of Vāsudeva—only its brick foundation exists of which also the Garuḍa stone pillar with the inscription of Heliodoros, son of Dion and an inhabitant of Taxila, formed part (see also ASIAR, 1913-14, Pt I) These relics date from the 2nd century B C The balustrade of the terrace of the Buddhist Stūpa of Amarāvatī, Kistna district, similarly consisted of uprights with a rectangular slab morticed between The majority of the stone railings, such as those in Sāñcī, Barhut, etc are stone versions of wooden prototypes

The Mora well inscription from Mathurā of Mahākṣatrapa Śoḍāsa, of the 1st century B C speaks of a temple, a "sailadevagr " a "stone house of god" where 5 images in stone of the holy Pañcavīras of the Vrsnis were installed No trace of this temple is left ('Epigraphia Indica', XXIV , J N Banerjea, JISOA, Vol X)

Another inscription of the 1st century B C from Nāgarī, Udaypur, Rajputana ('Ep Ind ', XXII, p 204) says "This 'pūjāsilā-prākāra', enclosing wall, round the stone (object) of worship, called Nārāyana-Vāṭikā (compound) for the divinities Sankarṣana Vāsudeva has been caused to be made by (the king) Sarvatāta who is a devotee of Bhagavat (Viṣnu) and has performed an Asvamedha sacrifice" Part of a high stone enclosure is preserved , but only a brick platform on which stood a temple of brick or stone The stone fence consists of large stone slabs inserted in grooved stone uprights , in this technique also are the perforated screens or windows set into the walls of Gupta temples in central India and in the Lad Khan Temple in Aihole (Bijapur District)

Of subsequent inscriptions referring to stone temples, the Eran stone boar one speaks of the 'silāprāsāda', the stone temple of Toramana ('Corpus Inscr Ind '), a Viṣnu temple, it appears , and the Gwalior stone inscription of Mihiragula designates this stone temple (saila-maya prāsāda) as one of Sūrya, the Sun

[40] A detailed study of the qualities of specific stones, their marks, etc , is made in 'Śilparatna', XIV, 2-14

[41] 'Īsānasivagurudevapaddhati', III ch V 9 (trans JISOA vol X p 221)

[42] From the south-east, according to 'Bṛ Samh ', LII 110, from the north east, according to the V D , l c

The relation of the stone and the brick in the rites of laying the foundation of the temple is multiple. Where the stones are considered altogether as 'brick' or their substitutes, the mantras by which they are invoked are the same, the stone-bricks may be relatively larger than the earthen ones.[43] The ritual stone foundation is always laid in the centre of the pit in accordance with the central structure and symbolism itself of the Vedic Agni. The ritual brick 'foundation' however is below the door-jamb, it underlies and pre-faces its vertical direction.

There are thus two distinct foundation rites of the stone buildings, either of them is performed in the centre of the pit. The one is based on the Ādhārasilā, the support given by the first stone, to the total structure. Its symbolism proceeds in the vertical, from the Omphalos or Nābhi, which here appears as Ādhārasilā.

The other rite follows closely that of the laying of the first bricks. There the stones or bricks are spread out horizontally and demarcate a square. Above this 'altar', in the case of actual bricks, the Garbhapātra, the vessel which holds the Garbha, is immured in the building.

The rites of the central stone foundation are indicated in the relatively early texts, such as the 'Matsyapurāna' and the 'Visnudharmottara'. They are described explicitly in later texts.[44]

In the middle of the foundation pit[4] and after threefourth of it has been filled, the Ādhārasilā is laid down. According to the 'Tantrasamuccaya' I ch. I 74-89, and the 'Śilparatna', X 6-13, a treasure jar (nidhikalasa)[46] made of stone or copper is placed on the Ādhārasilā, on the jar a stone lotus is placed, on the stone lotus a stone tortoise, on the stone tortoise a silver lotus and on it a silver tortoise, on the silver tortoise a gold lotus and on it a gold tortoise. From there a funnel shaped tube, the Yoganāla, made of copper leads up to the plinth (janman, 'Śilparatna', l. c.) or to its lowermost moulding (upāna, 'Tantrasamuccaya', l. c.). In the treasure jar is invoked Bhuvanesī as Greatest Śakti, Holder of the Āsana, the seat or foundation of the temple.' The several symbols strung together in the vertical direction illustrate the meaning expressed in words: the sun strings these worlds to himself on a thread of his rays (Ś. B. VII. 3. 2. 13). The hierarchy of existence is shown here by the different substances

[43] 'Hayaśīrṣapañcarātra', VIII. 141-42: "a stone or brick of good quality should be placed in each of the 4 directions."

[44] To this day, the foundation rite is called in Amritsar for instance, 'silā-sthāpan' the setting up of the stone ('Indian Antiquary', vol. XXXVIII, p. 122 f.).

[45] 'Tantrasamuccaya', I ch. I. 89, states clearly that the position in the middle of the pit, where the first stone, the support of the building is to be laid, is altogether distinct from the plot assigned to the first bricks; in all the texts unanimously this is to the right side of the door of the temple, below the door jamb. The 'first stone' is laid on one level (that is when three fourths of the pit are again filled) with the first bricks.

[46] In the 'Viṣnudharmottara', the jar is prescribed to be of stone only. Copper-jars are prescribed in the rite of the first bricks, in the 'Īśānapaddhati', l. c., and elsewhere.

[4] During excavation at Gokul, near Mahasthān, Bogra, Bengal, the Ādhārasilā of the temple was found in the centre of the structure. It is a stone slab with 12 small holes and a bigger hole in the centre; in the central hole was a rectangular piece of gold embossed with the figure of a bull. The stone slab lay four brick courses below the level of the innermost central pit. ASIAR. 1935-36, p. 67.

of the symbolic forms Stone, here is the last support, the rock bottom on which is firmly established the vertical order The prototype of this kind of vertical symbolism was built into the Fire Altar (Ś B VI 2 3 1-5) [48] In Hindu inward worship (antaryāga, inner sacrifice) this vertical symbolism is present in the meditation called Pīthapūjā, the worship of the 'basis' or 'support' [49]

In the centre of the 'ātman' or body of the Fire altar above the bundle of grass, which was the first 'istakā' or "brick"[50] of the first layer the priest (Adhvaryu) placed a lotus leaf, a golden disc, a golden man and on the golden man the first naturally perforated 'brick' (svayam-ātrnnā) or self-holed stone, at a prescribed distance to the east of the centre, he set down a living tortoise on lotus flowers, so that it faces the golden man The lower shell of the tortoise represents this terrestrial world and the upper shell is the air world (antariksa) (Ś B VII 5 1 2) In the foundation of the temple, the stone tortoise too has to be set down first by the side of the treasure jar and then only is it placed on that jar and above the lotus

No golden man forms part of the symbols in the foundation of the temple His identity is absorbed in the Vāstupurusa The place of the golden Purusa is now occupied by the Vase, full of power (sakti)

This means a transfer of spiritual levels, no golden disc—the sun's orb—is placed below the vase, it rests on the Ādhāraśilā which is not round but square, and not of gold but of stone Above the Śakti-vase is placed the lotus made of stone, an unfolding of all the possibilities such as are in the Ādhārasīlā, and on it rests the stone tortoise, who is Visnu[51], the stability[52] of this world Śakti and Visnu are part of the 'support' of the temple, and stability is exemplified in the three superimposed regions of the earth-world, the air-world and heaven by the stone lotus and tortoise, the silver lotus and tortoise and finally their golden replicas This picture of stability in the hierarchy of the worlds, is led into the visible temple, built above ground, by the Yoganāla, the funnel shaped tube with its wider opening at the bottom [53]

The symbols of the Ādhāra, the support, refer to these worlds of existence and not to that world which is beyond manifestation above the golden disc of the Sun immured in the Fire Altar [54]

The Ādhārasilā occupies the central place in the site which will be covered

[48] The Svayamātrnnā, or self-perforated stones (Ś B VIII 7 3 13, 19, VIII 7 4 1), are placed in this vertical sequence the first on the golden man in the centre of the bottom layer, the second in the centre of the third layer, the third upon the centre of the completed fifth layer They represent the 3 worlds, the holes being intended to afford to the sacrificer (represented by the golden man) a passage to the highest regions, SBE Vol XLI, p 155

[49] In the Pīṭha-pūjā the Great-Yoga-base (Mahāyoga-pītha) is realized as consisting in vertical sequence of Ādhāra-Śakti, Mūlaprakrti, Ādikūrma, Ādivarāha and Ananta

[50] Any unit laid down in the Agni is called a brick (iṣṭakā) The 5 'iṣṭakās' of the first 'cit' or layer are given in Ś B X 4 3 14

[51] 'Tantrasamuccaya', I ch I 79, 'Īśānasivagurudevapaddhati', III ch V 9, 'Visnu-samhitā', XII 82-88

[52] Pratiṣṭhā, 'Katha Upaniṣad', I 14

[53] 'Tantrasamuccaya', I ch I 80

[54] Re the symbol Āmalaka see Pt VIII

by the building of the temple[55] In the Fire Altar, this central place is the site of the navel (nābhi) of the Uttaravedi In its own position the Ādhāraśilā is the omphalos or 'nābhi' of the temple which is the concrete form (mūrti) of universal manifestation [56]

In certain instances both the rites are performed, the rite of the Ādhārasilā, the stone support, and the rite of laying the first bricks The stone foundation rite is enacted separately in the following night the laying of the first bricks, south of the main door takes place ('Tantrasamuccaya', I ch I 81-82) The all important deposition of the Garbha, the Seed and Germ of the temple, is made above the first bricks on varying levels, according to the status of the donor of the temple [57]

That the name of the First Brick, Ādyeṣṭakā or Prathameṣṭakā is extended also to the first stone, etc shows the rite of depositing the bricks to be the more comprehensive one In this way, the foundation rite of a temple, built of any substance can be performed as Istakā-nyāsa When the Śilānyāsa is performed as Istakā-nyāsa, when the first stones are laid alike to the first bricks, a stone jar is deposited in the centre and the stones are laid in the corners of the square with the invocation which is that of the Earth in its fulness, and of the bricks , "O Nandā, O Vāsisthā, gladden with wealth and progeny , O Jayā, bearer of victory, O goddess, bring thou victory O Pūrṇā, thou fulfilled one, daughter of Angiras, make me one with all desires fulfilled , O Bhadrā, daughter of Kāśyapa render my mind gentle O ye, endowed with all seeds, full of all gems and plants, Rucirā, Nandanā, Nandā, Vāsisthā, take your pleasure here O divine daughter of Prajāpati, thou square one (caturasra)[58] and handsome in all parts, Mahīmāyā, Subhagā, Suvratā, Bhadrā, Kāsyapī, take your pleasure in this building O Bhārgavī, honoured by great teachers (ācārya), decorated with perfumes and garlands, benefactress of the world, take your pleasure in this building O thou Perfect one, perfectly proportioned, with beautiful eyes, daughter of Angiras, bestow (on us) the desired (blessings) I now install thee (pratisthā)" ('Visnudharmottara', Pt II ch XXIX 84-89)[59] With many names and as

[55] The proportions of the several parts of the Ādhāra are derived from the height of the pillar of the temple, according to 'Tantrasamuccaya', II XII 3 and 'Śilparatna', X 6 13 In the later text, the added height of Kalasa, Padma, Kūrma and Yoganāla (jar, lotus, tortoise and tube) would be below one-half of the height of the pillar of the temple to be built , and the whole Pīṭha, according to ib X 7, would be about three quarters of the height of the pillar of the building

[56] The square Ādhārasilā has a depression in its centre ('Tantrasamuccaya' I I 74) wherein grain is deposited and on it the Nidhikalasa, the treasure jar

The place of the Ādhārasilā should thus lie along the vertical axis which is laid through the centre of the Brahmasthāna There, Brahmā is beheld on the navel-cord (nābhi sūtra) of Vāstu puruṣa [Viṣnu-Nārāyana] ('Kāsyapasilpa', II 24)

[57] According to 'Mayamata', XII 104, the First Bricks should have a width equal to that of the Garbha, and should be twice as long and half as thick (cf note 28)

[58] 'Caturagra', in the text

[59] There are variations in the mantra, in the different versions 'Hayaśīrṣapāñcarātra', XII 290-294 , 'Brhat Samhitā', LII 112 , 'Vāj S', XX 9 XI 44 (Kāṇva recension) The first śloka of this mantra is the invocation of the Earth in the rite of Garbhādhāna , cf 'Īsānasivagurudevapaddhati', III ch XXVII, and 'Viṣnusaṃhitā', XIII 43 f , in slightly different versions It is omitted from the 'Viṣnudharmottara'

daughter of Prajāpati,[60] the lord of creation, and as square, Earth, the goddess in her wealth and perfection, is invoked in this rite of placing the first stones There is no vertical symbolism of the centre here as that of the Fire altar or of the Ādhārasilā of the temple and of the Pītha-pūjā

Stone, as a substitute for brick shares in its rites, they differ from the vertical symbolism of its own rite of installation in the centre of the pit of the temple corresponding to the centre of the Vedic altar The symbolism in the vertical of this foundation is understood in the Hindu temple as the realm of Śakti and Visnu, the seat of the supporting Energy and Stability below the level of the temple as Purusa Stone takes its place in the tradition, it is in the very centre of the sacred site

Stone, declares the 'Mayamata' (XV 78) should be used for temples and is allowed to Brāhmanas, Ksatriyas and heretics (pāsandin) but one should not use it for Vaisyas, and Śūdras Once more (XXV 186-87)), the 'Mayamata' says stone or wood are fit for gods, Brāhmanas, kings and hermits (āsramin), stone is not fit for Vaiśyas and Śūdras

The particular position of stone in the foundation rite has its prototype in the position of the central substances in the Vedic Agni, such as the Svayamātrnnā "bricks", themselves of stone

Apart from this, hermits and ascetics had chosen stone and rocks for their retreat ('Arthaśāstra', XIII 2) Heretics, such as the Buddhists and Jains enlarged and embellished those retreats into rock cut monasteries and temples The Hindus too carved and hollowed the living rock into cave temples though with some reticence, the earliest cave sanctuary, in Udayagiri in Central India dates from about 400 A D only The 'Visnudharmottara' refers to the installation of images particularly in caves [61] Of rock cut temples the later texts have but little to say

Stone, when quarried and cut is an enduring and noble material, fit for gods, priests and the ruling classes It is "100 times more meritorious to give a brick temple than a thatched temple, 10,000 times more meritorious to give a stone than a brick temple" ('Mahānirvāna Tantra', XIII 24, 25) The 'Mayamata' makes stone beyond the reach of the lower castes The attitude of the 'Visnudharmottara' is different White stones are assigned there to the Brāhmanas, red ones to the Ksatriyas, yellow to the Vaiśyas and black ones to the Śūdras (Pt III ch XC 2), in exact imitation of the colour of the soil as it is fit for the respective castes

[60] Kāśyapa is Prajāpati , Vasiṣṭha, Bhrgu and Angiras are Prajāpatis

[61] A legend tells of the connection of sacred cave and temple, although in this particular instance the reference is to a structural and not to a rock cut shrine, the Kapotesvara temple at Chezarla, built about 400 A D , in the Guntur District, Madras It is an apsidal, barrel vaulted, brick structure, re-decorated in the eighth century and still standing (Coomaraswamy, HIIA, Fig 147)

The legend tells of Yogīs who performed austerities in the local caves at Devarakonda and how these Yogīs were transformed into Lingas by the power of their austerities Rāja Śivi of Kashmir who had come there and was giving up his life for a dove was also transformed into a Linga The Brāhmanas erected a temple there and named the Linga Kapotesvara, the Dove-Lord, as Śivi had given up his life for a dove (A Rea, 'Report, Southern Circle', G O No 382, 1889 , 'ASI , Southern Circle', Report 1917-18, p 34)

Accordingly also, white clay should be used for bricks for Brāhmanas and so on (ib Pt III ch XCI 1)

Stone as part of the earth shares in the rites due to it, building stones however are quarried, taken from the earth by force, they have been rent from their living context like the trees which are felled for their wood So the Sthapati and astrologer go to the quarry or to the forest and propitiate in the same manner the spirits who live in stones, all the gods, Yaksas, Vidyādharas, Rāksasas, Pisācas, Nāgas, Gandharvas and the eighteen Ganas" ('Vaikhānasāgama', X ), and those who live in the trees ('Visnudharmottara', Part III ch LXXXIX 13 f) with the request to change their abode and depart quickly ('Vaikhānasāgama', ch X ) With similar words, and also with offerings, the spirits who reside in the soil are requested to leave before building is begun ('Brhat Samhitā', LVIII 9-11, 'Īsānaśivagurudevapaddhati', III ch XXVI 73-74) This is done whenever a part of this earth is taken possession of and converted by the art of man into the residence of his God

"Let goblins, godlings and gnomes (guhyaka) depart, O tree, may Soma, the Moon, grant you further strength Luck to you, sons of the earth, gods, and gnomes I shall do this work (so please) change your habitations " This incantation precedes the felling of the tree in the 'Mayamata' (*XV 89-90*) At this moment the 'Bhavisya Purāna' (CXXXI 33) addresses the tree directly as 'God of gods', after having consoled the tree "O tree, go to the temple of the gods for the benefit of all the tree world There you shall remain safe from the wood cutter's axe and from fire" "You will obtain the position of a God and people will worship you" (ib 27-29) Then the tree is brought to the workshed and kept there for six months ('Mayamata', XV 103-104) The wounds made by the axe are healed by the honey of the words and by the honey which has also been smeared on the axe (V D Pt II ch XXIX 48-49) Magical knowledge is combined with practical experience which requires that the wood of the tree should be seasoned so as to be fit for building and carving Correspondingly, various tests are applied to the stone before it is quarried by which its suitability for building temples and making images becomes known

Stone, severed from the rock, taken from its site, is transformed in its nature, alike to the wood, when it becomes the substance of which the temple is built, imbued as are the bricks, with its indwelling Essence The single courses of the stones of the temple have the height of the respective mouldings, reglets, etc

Stone, in its natural site, the living rock, is also made to hold sanctuaries and to simulate stupendous temples, such as the Kailāsanātha Temple at Elura (Hyderabad) of the eighth century and the smaller, rock cut shrines of different types at Mamallapuram (near Madras) in the seventh century and at Kalugumalai (Tinnevelly District, in the extreme south of India) in the eleventh century, at a time when the rock cut Buddhist Caitya halls and Vihāras had fulfilled their purpose and evolution and the Jain excavations (Indra Sabhā at Elura) had kept pace with the rock cutting activities of Buddhists and Hindus

But for a brief mention of the caves where, particularly installations should be made "for the denizens of heaven are present at these places" ('Visnudharmottara', III XCIII 27-28), Vāstusāstra designates these secret (guhā) places as Layana, when they are rock-cut temples ('Samarānganasūtradhāra', LIX 236) These, in their transformation by art, are stations of a 'return to nature' symbolic

of man's return to his original state and higher Self, the devotee enters them as places of release equal to the structural temples with their transubstantiated walls The cutting and entry into the living rock would thus re-instate man in that integrity from which he had departed and fallen since the Krta Yuga, the Perfect age, when he lived in the hills at peace with himself

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The death of the tree, clay or stone is effected in darkness[62], the tree has to be felled in the evening ('Visnudharmottara', III ch LXXXIX 13-15) and when the night draws towards dawn, the spirits of the soil leave the field which is to be converted into the site of the temple ('Īsānaśivagurudevapaddhati', III ch XXVI 74 f)

Having been made dead to their natural selves, with the spirits who animated them once departed for good, clay, stone and wood are freed from their former associations These were specially felt by the ancients in front of the trees for man and tree are closely connected in their life and fate Not only in Paradise does a tree play its part in the fall of man, the Purānas, 'Brahmānda' and 'Vāyu', tell the story of the fall of man, through the ages, after the Krta Yuga, the Perfect age, from the Tretā Yuga, when trees appeared for the first time and housed mankind [63]

In the Krta Yuga, people lived on mountains or on the sea-side They had no houses and no grief They moved about freely, glad at heart and none hurt the other for they had what they wanted They achieved their desires by thinking about them Whatever they desired came out of the surface of the earth In the course of time, however, they diminished in inner stature and grew out of this age of wisdom and contemplation, this process brought them into the Tretā Yuga Now their decreased thought-power was made up by the first rain that fell and it was compensated by the trees which now appeared and whence they obtained all kinds of enjoyments and useful things The trees were called "houses" (grha) and they were like houses There the people lived without effort and without want, yet passion and greed (rāga-lobha, 'Vāyu Purāna') arose in them and the house-tree vanished Then only did the people begin to think again and once more the trees sprung up Again the people became greedy seizing even the trees for themselves, in response to their greed and its satisfaction, the other pairs of opposites also came into existence, scorching heat and piercing cold, etc Now men were compelled from outside to protect themselves even further and they began to build houses, exactly like the trees, but in their own measure

Units of measurement, such as the width or digit of the finger or cubit (angula, hasta, etc ) came into use from that time and the houses retained what had belonged to the trees, the 'branches' (śākhā) and the name [64] In this story of man's fall

[62] R Guenon, 'De la Mort Initiatique', É T 1934, p 174, "Every change of state is accomplished in darkness"

[63] The following is a resume of the version of the 'Brahmānda Purāna', I ch VII 46 83 The account of the 'Vāyu Purāna' ch XLV 11-50 differs in details

[64] The account winds up with a popular etymology,—deriving the word 'sālā', hall, from 'sākhā', branch Śākhā is however the name for door-jamb ('Brhat Samhitā', LII 26 comm ) —and with a happy end saying that as the people felt happy in the big buildings, these were called Prāsāda This popular etymology of Prāsāda is also given in the 'Īsānasivagurudeva paddhati', III ch XXVIII 1-2 "Prāsādas please (prasīdanti)", and copied from there, in

from the Principle and of his degradation since the Perfect age, the house-tree springs up in compensation for his falling knowledge and thought power It is a 'tree of knowledge' in which man then dwelt From that time, too, measure originated resulting from division In this divided world, divided by the dual and distinct knowledge of the contraries or pairs of opposites, men dwell in houses which preserve in their name, the memory of trees, their prototype

The 'Mārkandeya Purāna' (XLIX 24-30) describes the fall of man succinctly In the Tretā Yuga men fell from heaven Those wish-fulfilling (kalpa) trees, were produced, commonly called 'houses' (grha)[65]

The wish-fulfilling tree, a concomitant of the fall of man is the tree of knowledge, it witnesses and holds his fall, it is the prototype of the 'house' in which man dwells Beheld 'historically', the appearance of the house-trees is subsequent to the down-coming of the Vāstupurusa, which took place towards the end of the Krta Yuga and was complete in the Tretā Yuga The earth then was steadied and levelled, the plan laid out of the house on earth and the residence which Yama, Death, grants to men

Wood has primacy in the building of houses, brick, in the piling up of sacrificial monuments Brick belongs to man, the sacrificer, in his effort at reconstruction and winning back a wholeness of which he knows himself as part or token Wood is known by him as a symbol of that wholeness He clings to it during his fall

In the Rgveda the question is asked "Which was the wood, which the tree from which they (the gods) shaped[66] heaven and earth"? (RV X 81 4) "Brahman was the wood, Brahman the tree from which they shaped heaven and earth" is the answer in the 'Taittirīya Brāhmana' (II 8 9 6) The Supreme (parā)[67] meaning of wood is Brahman, who is the operative and immanent cause of the universe, because of making himself so and by modifying himself into this universe ('Vedānta Sūtra', I 4 25)[68] While modifying himself in the universe, the Great

the 'Śilparatna', XVI 1 The true etymology and meaning of Prāsāda however is also given in the 'Īsānasivagurudevapaddhati', III ch XII 16, JISOA, vol X p 225, see Part V

Re tree-houses, see for example an Urali tree house, 'Travancore Information', vol I No 7, p 75, or supported on one stem, like the top of a tree, the type of the Mot Cot at Hanoi, Coomaraswamy, 'Early Indian Architecture', 'Eastern Art', vol III Pl CII Fig 36, connected with them is also the Diwan-i-khas with its central pillar in Fatehpur Sikri (1570-80) The single pillar there supports the place for the throne on which Akbar sat, cf also the 'eka-thūnaka' and 'eka-tthambaka pāsāda' of the Jātakas, Coomaraswamy, l c

[65] Akin to this is the Kalpadruma, produced as one of the 14 gems at the Churning of the Ocean It is understood as the 'mind which gives everything for the mere thought' Full of such wishing trees is the Elysian land of Uttara-Kuru ('Mahābhārata', Bhīsma parva, 'Rāmāyana', Kiṣkindhā kānda, cf V S Agrawala, 'The Kalpavṛkṣa motif in art and literature', JISOA, Vol XI pp 1-8) The wishing tree grows close to the primordial perfection and when it is no more It is a shoot, but not the whole of the world tree

[66] The word here used is 'taks', to cut off, with a carpenter's axe

[67] The physical, subtle and supreme aspects (sthūla, sūkṣma, parā) belong to the substance prior to its employment in the work of art and are re affirmed by the use to which it is put by the craftsman

[68] "This modification does not conflict with the idea of Brahman being eternally unchangeable"

Being is in the midst of it. The Skambha Hymn of the Atharvaveda (X. 7. 1-3) says: "Skambha bears these three worlds, the earth and the sky, Skambha bears the wide atmosphere, Skambha bears the six vast regions and has pervaded this entire universe." The Skambha is "the Great Being in the midst of the world" "to whom all the gods are joined as the branches around the trunk of the tree." In the same sense a twelfth century inscription[69] says of a high temple of Pradyumneśvara that it is like to the trunk (of a tree) whose branches are the cardinal regions and which is placed in the middle of the great Ocean (of air which is held above us) by the vault of heaven. It is the sole pillar upholding the House of the Three worlds. In this its supreme aspect, wood is the substance of the principal Essence.[70] This world tree is the tree of life. Its stem passes through the centre of all life, of every state of being; from it they ramify; at the top of this tree is the sun, its fruit. In this tree all the birds make their nest as man did when he still lived near the age of Truth, the Perfect age, the Satya or Krta Yuga, when the tree witnesses his gradual estrangement and still supports him as tree of knowledge.

Wood which has in the Skambha its prototype, makes construction easy; it serves as support and cover; its employment is the building which admits space in its interior or encloses space, and not the compact monument. Wooden temples, as represented in the carvings of Bharhut, about 100 B.C. and as described in the 'Samarāṅgaṇasūtradhāra' (ch. XLIX), after 1000 A.D., are 'hall temples', pillars support their roofs or ceilings (see Pl. VII). The bulk of the timber on the other hand lends itself to being carved, to being cut into. Accordingly the temple is an image of the macrocosm, is shaped from that primordial wood which is Brahman.[71] The open pillared wooden temple having no walls has also no compact bulk; like a sculpture intricately undercut and carved in the round it is as if taken from the wood of the World Tree. Congenital with this vision is the practice of cutting temples and other buildings and sculptures out of the living rock. The living rock in its substance is likened to the bulk of that wood.

The priority of evolved wooden forms to other highly complex types of constructive building in Indian architecture is common knowledge. The most natural wooden form is the arch, particularly of light woods, such as bamboo, bushes and branches; distinct from brick and stone, the wood of bamboo grasses and of branches is pliable. While the heavy wooden log or the stem of the tree

[69] Deopara inscription of Vijayasena, 'Ep. Ind.' vol. I, extracts following the translation by P. Mus, op. cit., BEFEO XXXII, p. 413.

[70] It is as All pervading Tree, that the tree is worshipped as god of gods, used as substance for the images of gods ('Bhaviṣya Purāṇa', CXXXI. 33) before the special tree is felled for the carving of the image. The timber is then brought to the work shed and allowed to become seasoned during 8, 5 or 3 months according to the variety which is used ('Īśānagurudevapaddhati', IV. XXXIII. 34).

[71] RV. I. 20. 2. The work of the Ṛbhus, the artists of the gods, is compared with that of a carpenter, Takṣaka (from the root 'takṣ'); they unite mind (manas) and word (vāk), —either of them hewn out of the Brahman wood.

[72] The scarf jointing of the coping and the tenons of the uprights of the stone railings set up by Buddhist and Jains in the centuries before and after the beginning of the Christian era. Pañjara, the 'cage' originally of plaited bamboo strips, remains a technical term for a miniature shape of a building (anukāya) in brick architecture and stone bonding (Part VII).

furnishes the supreme aspect of the substance wood, the arch is symbolic of its subtle aspect

When a person had died and was cremated, the 'Āpastamba Śrauta Sūtra', XXXI 2 36, prescribes that two branches of Palāsa or Śamī wood are fixed in the ground, to the west of the cremation site, at the top, the two branches are tied together with a string of Darbha grass Under this arch, the relatives of the dead person pass from South to North, from the realm of death to that of men They return to life, purified by having passed beneath the arch, the purifying (pavitra) arch of god Savitar, the Sun, extended thousand rayed in space [73]

The subtle aspect of wood is the arch Bamboo and branches bend naturally Heavy logs of wood were bent artificially while being steamed to yield similar curves Finally, the form of the arch is cut in brick and stone Moreover, the entire superstructure of the temple, the Śikhara, has the curves of bending bamboo, or other light woods, etc in most of the Hindu temples

The stem of the tree on the other hand, the wooden post,—with the exception of rock-cut pillars,—has remained at all times the primary support of the buildings The stone or brick pillars of the temples have incorporated into their bulk the proportions of their wooden prototypes They are either equal to them in measure, or their width is increased proportionately to one and a half or twice that of their wooden prototypes ('Śilparatna', XXI 118)

Brick, made of earth which has gone through the fire, is the substance in which is reconstituted the body of Prajāpati-Agni, it is at the same time the sacrificial body of man, the sacrificer Stone has its place at the navel of the earth, at the centre and basis of monumental building activity Wood in two ways adds its 'immortal' form the trunk of the tree, support and substance of the universe, the manifest Brahman, and the arch, through which man returns from the darkness of death to life in its radiance and is reminded of his principial state which is that of 'moksa', release from life, when he is united to the principle and at one with himself

Altogether these, earth and clay, brick, stone and wood are Prakrti which is the substance of the temple, in relation to its Essence and meaning, the Purusa His likeness had been forecast in the lay-out of the Vāstupurusamandala

[73] The arch of the 'form of nature' (prakrti) is there so that one may pass through it, surrounded by its glory Gopinath Rao, 'Elements of Hindu Iconography', Pt I vol II, p 248, quotes a Tamil work, the 'Tiru arul-Payan' (ch IX 3) which explains the Tiruvāsi, the arch or halo (prabhāmandala) as the encircling "dance of nature (prakrti) contrasted with Śiva's dance of wisdom (jñāna)"

The symbolism of constructed buildings, in the vertical direction, is one of ascent and also of support The world tree with root above and branches below ('Bhagavad-Gītā', XV 1), descending from that root, the Para-Brahman, does not give its 'inverted grained' wood for the symbolical substance of the temple This tree leads back all Knowledge to its root, the World tree from which the temple is cut out is an image of manifestation, its wood when felled is the timber for the construction of the temple The tree is always the same but the viewpoint varies with the level of the beholder An article on 'The World Tree' by Śrī Swāmi Hariharānand Saraswatī, JISOA, vol XI, pp 196-207, explains the meaning of the "Tree with its Root Above"

Before the work is begun, the axe, the line, the hammers and all the other instruments are worshipped with incense, flowers and unhusked rice ('Viṣṇudharmottara', Pt III, ch XC, 29, 'Samarāṅgaṇasūtradhāra', XXXVII 28) This makes them fit to perform the task in the hands of the competent craftsmen ready for the inspired moment of action

# PLASTER

Whether an Indian temple is built of wood, brick or stone, the work is done with precision Bricks and stone are carefully laid and joined (suyuktyā, 'Viṣnudharmottara', III, ch XCI, 12) The stones are frequently kept in position without any cementing material [74] Iron clamps are used for wooden joints, if need be and where the masonry is dry the stone blocks are held together with iron dowels (Deogarh) Sudhāsilā, plaster, and Vajralepa, a glue cement and coating, were applied, there is no lack of prescriptions how to prepare them Vajralepa is a hardened glue mixed with other substances such as conch shell powder or white earth (caolin) Vajralepa is made either of purely vegetable substances, gums, resins, and viscous residues, or else it is produced from animal substances, hides and horns, to the latter could be added a mixture of metallic substances, or of lime Vajralepa which means 'diamond plaster' is so called because it is specially durable and firm, it is recommended for these qualities, in the 'Śilparatna' (XIV 58-75), in a passage which deals with the different kinds of lime plaster (sudhā) The careful process of mixing the several ingredients with the granulated and powdered lime from gravel and conch shell lasted from two to four months with the result that the plaster was not only durable but also that it had none of the stark deadness of effect which for instance whitewash imparts It is a rich and creamy white, discreetly shining, like polished ivory or some ancient enamel [75] Under this white, smooth, polished plaster, stone and

[74] The practice of building with cyclopean stones (cf Jarasandha ka baithak, Rajgir) (Kramrisch, in Vol VI, p 235 of Springer's 'Kunstgeschichte') persisted in the Hindu temple in the courses of dry masonry of carefully dressed and relatively very large stones (Gupta temples in Central India, early Cālukya temples in the Deccan, early Cola temples in South India) In the Cālukyan temples, dry masonry, with no cementing materials between the stones, was employed in the earlier sandstone buildings (H Cousens, 'The Chālukyan Architecture', *ASI NIS* Vol XLII) This is also true of the mediaeval temples of the Deccan built of amygdaloidal trap (H Cousens, 'Mediaeval Temples of the Dakhan', *ASI IS* Vol XLVIII), of those in Gujerat (J Burgess-H Cousens, 'Architectural Antiquities of Northern Gujerat', *ASWI* Vol IX), and of Orissa (M M Ganguli, 'Orissa and Her Remains', p 257)

Metal has been used for bonding from the Mauryan pillars onwards (bronze dowels or copper cramps) Wrought iron beams form a grid as framework for the stone masonry of the ceiling of the Maṇḍapam at Konarak, Orissa, in the 13th century

[75] Some of the most perfect temples in Central India, at Khajuraho, have their facing stones of fine sandstone embedded in lac (lakh), apparently resinous Vajralepa, chunam concrete being generally used in the core Iron clamps are also freely employed, (B L Dhama, 'A Guide to Khajuraho', p 4) In the Panjab the Kafirkot stone temples are cemented with lime mixed with quartz (Cunningham, *ASI*, Vol XIV, p 26)

The earliest preserved dry masonry is the stone facing of Stūpa I, Sāñci, the earliest occurrence of lime mortar in historical times is in the brick foundation of the Viṣṇu temple at Besnagar (*ASIAR*, 1913-14) Brick temples have frequently a thin layer of a clay mixture as an adherent between the bricks (P Brown, 'Indian Architecture', Pt I, p 16) The brick temples in Sirpur, C P, seventh century, were completely covered by a thin layer of white plaster The bricks are carved (*ASIAR*, 1909-10, p 11)

The 'Bṛhat Saṃhitā' Ch LVI, 1-3, 5-8, and the 'Viṣṇudharmottara', Pt III, Ch XCII,

brıck are often combıned ın one and the same structure, stone ın the lower parts and brıck above, a practıce found not only ın South Indıan temples, but also ın

1-15, among the 'early' texts, gıve the ıngredıents of the various kınds of Vajralepa which were used ın stone and brıck buıldıngs Vajralepa formed also the ground for wall paıntıngs, thıs ıs descrıbed ın detaıl ın the 'Mānasollāsa' or 'Abhılāsıtārtha Cıntāmanı', a compendıum compıled ın the twelfth century

Four and five recıpes respectıvely of the preparatıon and ıngredıents of Vajralepa are gıven ın the 'Brhat Samhıtā' and ın the 'Vısnudharmottara' Two of the preparatıons are purely vegetable, one consısts of anımalıc glue and vegetable substance, the fourth contaıns metallıc substances and ınto the fifth (V Dh l c, 10 11) a concoctıon from cowhıdes, etc, and lıme has been mıxed

These dıfferent kınds of Vajralepa, the 'adamantıne glue', are used for external applıcatıon, on stone and brıck buıldıngs, accordıng to both the early texts V Dh ıb, 12-13, ındıcates that these mıxtures are also used for cementıng the stones or burnt brıcks of the buıldıngs

In the 'Mānasollāsa', II, ııı, 1, 132 40 (Cf also the 'Mānasāra Śılpa Śāstra' of which two chapters on paıntıng are translated by V Raghavan, *JISOA*, Vol III, p 19 f), the walls, to which lıme plaster (sudhā) has been applıed should then be coated with a paste of hıde-glue mıxed with whıte earth (kaolın ?) ın three layers, and above ıt another final coat of the same paste mıxed with powdered conch, etc Thıs passage clearly shows that the 'adamantıne glue coatıng' or 'plaster' the Vajralepa, ıs applıed ın several thın coats above the lıme plaster, Sudhā The final coat of Vajralepa, when completely dry, forms the ground of wall paıntıngs The 'Mānasollāsa' descrıbes as further use of the Vajralepa that ıt ıs mıxed with all colours In that case, the glue of the boıled buffalo skın ıs collected on small stıcks and allowed to harden It ıs then put ın an earthen pot with water and melted Thıs pure glue ıs to be mıxed with the respectıve pıgments It ıs thus a tempered medıum for paıntıng on the Vajralepa-ground (the reference ın V Dh III, Ch XL, to a decoctıon of hıdes, may ımply thıs too)

The wall paıntıngs, accordıng to the 'Vısnudharmottara', l c, are executed on plaster The plaster there, ın the maın, consısts of brıcks, varıously powdered, mıxed with clay and carefully prepared with gum resın, bees wax, lıquorıce, molasses, 'mudga' bean and other vegetable substances Sand, etc, has to be added ın due proportıon, the mıxture ıs allowed to consolıdate for one month, and ıs then applıed to the wall and left to dry If thıs dry plaster ıs not perfectly smooth, ıt ıs coated with clay plaster mıxed with resın and oıl which ıs carefully smoothed and polıshed On thıs dry, smooth wall the paıntıngs are produced acc to Ch XL, Pt III, of the 'Vısnudharmottara'

The kınds of glue Vajralepa, gıven ıb, Ch XCII, are not referred to ın connectıon with the preparatıon of the ground of the wall paıntıngs which ıs a brıck and clay plaster with a certaın amount of resınous and vıscous substances ın ıts fabrıc

The 'Śılparatna', XIV, 58 75, descrıbes dıfferent kınds of lıme plaster, maınly from powdered, etc, gravel but also of powdered shell and with a proportıon of sand to which the followıng lıquıds are added the sap of varıous mılky trees, Asvattha, Butea Frondosa, Kadamba, Myrobalan and Mango juıce, or curd, mılk, cocoanut water, ghee, as well as rıpe bananas, pulse, rıce gruel, etc, accordıng to the dıfferent types or desıred qualıtıes of the plaster Last of these varıetıes of plaster, Vajralepa ıs descrıbed 100 parts are lıme, 2 parts resın (karala), and small quantıtıes of ghee, bananas, cocoanut water, pulse, Asvattha sap and jaggery Re Vajralepa, a buffalo hıde glue, see Ch on Paıntıng, ıb XLVI 131-2

Vajralepa acc to the 'Śılparatna' XIV, 75, ıs a hıgh grade lıme plaster with two per cent resın ın ıts composıtıon, and other bındıng and adhesıve substance The term Vajralepa denotes a specıal kınd of plaster used ın buıldıngs, ın wall paıntıngs however ıt ıs a glue-coatıng and glue medıum (see above, and "'Śılparatna', Ch 64", Trans Coomaraswamy, cf ınfra)

Coomaraswamy, 'Indıan Archıtectural Terms', *JAOS*, Vol 48, p 263, says of Vajralepa, the adamantıne medıum, that ıt ıs actually glue It should be dıstınguıshed from Sudhā, plaster Thıs ıs correct, but when varıous glue substances are mıxed with the plaster, the whole mıxture ıs also called Vajralepa

the Deccan as in the Temple at Kokamthan, Ahmednagar.[76] On the superstructure of this temple the figure-symbols are cut or formed in the plaster only, while the carvings on the Kailāsanātha Temple at Conjeeveram are of stone with their ornaments and lesser details carved in plaster.[77] The calm radiance of the white temples is extolled in inscriptions.[78] In this whiteness, it appears, their 'sāttvika' quality, their conformity with the pure Essence (sat), shone forth.[79] This luminous splendour corresponds to the ascending tendency within the 'sattva guna', which is expressed by the vertical of the high superstructure of the temples and the total disposition of their mass. From the broad base they are built up towards the high point in the centre above even their mountainous superstructure or Śikhara.

Bricks and stone are frequently combined in one and the same building. The body of the temple is of brick and the door frame of stone,[80] or the body of the temple is of stone and the superstructure of brick,[81] or in a single architectural relief panel, the major part is stone and it is completed in brick on one side.[82] These varied combinations, for reasons of added strength or decreased weight or for the sake of expediency, are due to the relation of the craftsman to his work and towards the means of making it. Once he has taken the stone for instance from

Various recipes for producing an 'adamantine plaster' were used in the millennium, from the 'Brhat Samhitā' and 'Visnudharmottara' to the 'Śilparatna' in different parts of India. Lime plaster particularly described in the 'Śilparatna', the 'Mānasollāsa', and the 'Īśānaśivagurudevapaddhati', IV, Ch. XXXIII, 66 69,—'Vajrabaddha', an adamantine plaster used as ground for paintings,—South Indian text books, is also briefly mentioned in 'V. Dh.' III, Ch. XCI, 15, as Sudhāśilā, where its use is advised in temples, but not in houses. The same chapter (14) speaks of Vajralepa which is described in detail in the following chapter, as cementing material for baked bricks and stones, whereas mud cement is prescribed for unbaked bricks. Re plaster, cement and the ground of wall paintings, see also 'Mayamata', XVIII, 92—115.

[76] Cousens, 'Mediaeval Temples of the Dakhan', op. cit., p. 50. The walls are of stone, the Śikhara or superstructure is of brick. The carvings in stone are overlaid with plaster; in the brick portion, the carving is solely in plaster.

[77] Carving in plaster, and also in terracotta gives precision and dignity to these substances; cf. the carved bricks of brick temples from the Gupta Age (Deogarh, Paharpur, etc.) to those of the nineteenth century in Bengal.

[78] "The temple resembling a mountain shines white." Mandasor (in Lāta) Inscr., A.D. 473-74, line 16, 'Indian Antiquary', Vol. XV, p. 196. This temple was consecrated to Sūrya.

An inscription from the Lakṣmana Temple, Khajuraho, dated in the Vikrama year 1011, or 954 A.D., praises this temple in verse 42 as a "charming, splendid house of Viṣṇu which rivals the peaks of the mountains of snow", 'Epigraphia Indica', Vol. I, p. 121.—An inscription of the early 13th century speaks of repairs to all the temples in the city. They were also made resplendent by being newly plastered. Chebrolu Inscription, Kistna District, 'Ep. Ind.', Vol. V, p. 149.

[79] The 3 Gunas are Sattva, Rajas and Tamas. Their colours are white, red and black, and their inherent tendencies are ascending, expanding and descending, respectively. The three Gunas are the three constitutive qualities of Prakrti, the nature of the world.

[80] Sirpur, C. P.

[81] This is frequent in the later South Indian temples.

[82] Paharpur, Bengal. *ASIAR*, 1926 27, Pl. XXXII a.; Kramrisch, 'Indian Sculpture', p. 215.

the earth and the tree from the forest and its living context, with expiation and apology for his interference, he takes on himself the responsibility for giving them appropriate use in the new context This is to set up the temple as an image of the Purusa and as His dwelling The natural connection has been severed, the earth has been burnt, the stone has been cut, the tree has been felled and they arise as the temple and its parts *Their texture survives and it is given* consideration by the traditional and hereditary craftsman It would, however, amount to a retrogression from the state of grace into the state of nature were one to expect that the 'material' would guide the builder On the contrary, brick and stone alike, or in combination, may disappear under a coating of plaster, which might partly have been coloured too [83]

The 'material' does not demand from the Hindu craftsman in his treatment of it a consideration of its nature for it has ceased to exist as such The wood of a living tree fulfils a different function from that of a carved image, pillar or vaulted beam It has been converted to its new function by a series of processes, by art as well as by magic As little as Indian thought knows of 'matter' so little is the craftsman concerned with the material for the sake of its effectiveness He knows, on the other hand, its texture and the various qualities which make it suitable for one special purpose and not for another He does justice to them and applies his knowledge and sensibility to the lustrous malleable metals for instance or to the stones of different hardness and light-absorbing power in their carved surfaces These qualities act as evocative influences by the contact with his hand and eye and they make more close his identification, by his work, with his vision It is in the form of his work and its intense consistency This does not belong to any single statue or image only, for all the carved form, figure or architectural unit, however small, is part of a comprehensive whole, the temple It may show itself as made of wood, brick or stone or else be covered by a coat of egg-shell like plaster and painted detail Sometimes, as in the Kailāsanātha Temple at Conjeeveram, the detail is carved only in the thick plaster which overlays the stone, such embellishment far from being supernumerary tends to focus attention on every part to which it clings

Stone, brick or wood and also plaster and paint are substances of realisation In them the image or vision takes form, settles down, imbues their grain and fibre and gives them the new life, as part of the temple, the seat of God All the same these substances are true to this name also in another sense In them 'subsists' their grain and texture, the frame-work given to them by Yama, and it carries with it the memory of their original state This finally outlasts its own

[83] To what extent each structural temple was originally plastered, or plastered and painted, is difficult to say The cave temples of the Deccan, however, almost without exception were originally coated with plaster and painted, on their plain and straight, as much as on their carved and modelled surfaces Ellora, especially in the Dasāvatāra cave, Bādāmi and Ajantā have still painted plaster preserved on their images, especially in Ajantā, the large Bodhisattva figures in the sanctuaries of caves I and II, and on carved capitals and pillars, etc

In temples no longer in use whatever plaster there may have been has since disappeared or perhaps never existed at all, whereas it has been overlaid by the use of whitewash in those still in worship

particular substance, the curves of light woods for instance such as bamboo and branches, retain their resilience whether they are cut in brick or carved in stone.

"The clay is permanent but things constructed with the clay are not so" ('Brahmavaivarta Purāna', I. XXVIII. 29). The clay persists in nature, however many things made of it may perish. On the other hand, even when substances other than the clay are used, its feel, its qualities, and the ideas associated with it, persist; the form which resulted from a long and intimate contact remains a living memory and by it such other substances are shaped which are substituted for definite reasons. The clay, the brick, the wood and to some extent too the 'cyclopean' boulder of stone have each outlasted their original state and also their actual employment in the form and proportion of the temple.

The well known transfer of the construction forms of one material into the other is so caused. The curves of the bamboo for example are copied in bent wood and cut in brick and stone. In any material, it is the bending nature of bamboo stems or wooden branches, yielding the elements and the form of the arch. Whatever the material, it is made into the same form and conveys the same meaning. It is the form by which the memory of the original is made permanent.

The inherent quality, the subtle nature, of bamboo for instance, is thus restituted by giving it a permanency which its physical nature could not guarantee. This is done by art. This permanence, in art, is a quality of the form and belongs to memory. The transfer of form from the one more perishable, to the other, less perishable substance is a restitution of the 'subtle' body, of the original clay or wood. Though all things made of clay or wood might perish including clay and wood themselves their subtle nature is expressed in stone. It is the way of redemption, a relative guarantee of immortality which things constructed are able to give.

The substance of which the temple is built gives body to the indwelling Essence; from this point of view it is immaterial what it is, and it is also immaterial whether different substances are combined or the one is overlaid by the other, provided that the Essence imbues and impresses the form.

By their new destination, wood, clay, stone and plaster, etc. are transubstantiated. This comes about while they are being worked on. In this, however, they are not altogether passive, for they offer their obstacles as well as their particular facilities and these contacts are felt and remembered by the craftsman. Sensibility contributes its own share to a wider memory which comprises all those associations that have accumulated round the bricks or the wood in their traditional employment. A triple memory, that of traditional knowledge, of sensibility and of piety helps to preserve the subtle body, that is the particular quality and aptness of the several substances, severed as they are from their natural life and habitation, in a more permanent body which has but one ultimate destination.

Before the temple in the likeness of the Purusa is constructed[84], the rite of Garbhādhāna is performed and a casket which holds the Seed and Germ of the temple is immured in its wall, to the right of the door, above the level of the First Bricks [85]

As to a woman, the ancient rite of Garbhādhāna (RV X 184 1), of impregnation and steadying of the womb, is performed to the earth, she receives the seed (bīja) of the building and gives substance (prakrti) to the Germ Garbha means germ as well as womb, and the receptacle (garbhapātra) which is deposited holds the Seed,—the causal stage whence the unmanifest becomes manifest—and is the womb of the temple which is to arise The sacrificing priest acts as generator, the Guru who deposits the Garbha on behalf of the donor, on a night of flawless stars

The Garbha-vessel is generally of copper, but is also described as made of gold, silver or copper [86] Copper appears as a substitute for gold Gold is the prime substance of which 'images' were made, the golden disc of the sun and the golden effigy of the Purusa in the Agni, the fire altar, and thereafter the images of gods [87] It is a casket, raised in the folded hands of the priest towards the sky, before it is deposited ('Śilparatna', XII 5) Its dimensions are proportionate to those of the temple In width it measures one twelfth part of the height of the pillar or the wall proper of the temple Its base, generally, is square and may also be circular [88] Its own height is half of its width [89] Its absolute size varies

[84] 'Agnipurāna' LXI, 11, on the 'Vairāja' form of the Prāsāda The temple is the form of total manifestation, in its unity cosmic intelligence ('Virāj') is seen 'Visnusamhitā', XIII, 61-69, 'Śilparatna', XVI, 114

[85] 'Īśānaśivagurudevapaddhati', III, XXVII, 72 f Re The seed (bīja) of the Prāsāda, see note 95, the Prāsāda Mantra, Pt V, note 22, Pt VIII

[86] The casket or vessel (garbhapātra, phelā) is a counterpart to the Ukhā, the fire pan, the womb of the Fire, equal in size with the embryo, Agni The bottom part of this "earthen womb for the Agni" is this terrestrial world Of this alone, the Garbhapātra is a symbol, the Ukhā comprised the three worlds, "this world", air and heaven (Ś B VI, 5 2 3, VI, 5 2 22) The Ukhā is placed on the Nābhi (Ś B VI, 4 3 10) With regard to its position, the Nidhikalaśa on the Ādhāraśilā corresponds to it The Nidhikalaśa and the Garbhapātra are vessels of cognate origin and similar significance

According to 'Tantrasamuccaya', Part I, Ch I, 102, the Garbhapātra is a symbol of the entire world

Re gold, silver or copper, see 'Hayaśīrsapañcarātra', XII, 269, 'Kāmikāgama', XXXI, 8 9 Re silver, cf also note 87

[87] 'Matsyapurāna', LXVIII, 1, LXXIX, 3-4, LXXXIII, 15 Silver, however, should not be used in the worship of gods, it is associated with the Pitrs, the Fathers (ib XVII, 23)

[88] Square or circular, acc to the 'Vaikhānasāgama', Ch VIII, it is said to have the shape of a lotus, acc to 'Hayaśīrsapañcarātra', XII, 269

[89] The height of the cover of the casket is given in 'Kāśyapaśilpa', XXVI, 11, Ī P 1 c, 75, quoting the 'Mañjari', 'Tantrasamuccaya', II, XII, 5, 'Viṣnusamhitā', XIII, 23 f, 'Vaikhānasāgama', VIII, etc, various proportions are given, they should conform to the rule of three ('Mañjari', 1 c, 'Śilparatna', XII, 33)

and is classified according to several standards These are The number of the storeys of the building to be set up and which are given up to twelve or sixteen storeys [90] With the number of the storeys, the height of the pillar or wall of the ground floor varies There are moreover three grades of receptacles, the best being also the largest, one cubit (hasta) square The square casket with a length of 8 finger widths, and half as high, made of copper, seems to have been the one generally in use Inside, the casket is divided into compartments, like the Vāstumandala, and of varying number [91] The level at which the Garbha is deposited is highest for Brāhmanas, on the topmost moulding of the base and correspondingly lower for the other castes,[92] but above the ground, for all castes[93] whereas the 'Visnusamhitā' (XIII 25) prescribes that the Garbha for Vaiśyas and Śūdras should be deposited below ground

The position of the casket with reference to the castes shows the level from which the ascent towards the highest point, the apex of the temple, is undertaken, the road (mārga) for the Brāhmanas is shorter than that of the lower castes, in view of the total height of the temple this does not amount to much and altogether there need be no difference in the level of the Garbha deposited by the different castes The proportions of the casket are relative to the height of the building, and to its 'pillar' It belongs to the building for its measure is taken from it The contents of the casket are those of the ground (bhūmi) of the temple the divinities of the Vāstumandala reside in its compartments [94] The latter moreover are replete with the wealth of the earth, its precious stones, gems, herbs, metals, roots and soils These are distributed all around its Brahmasthāna Within the

While generally the height of the casket is half its width (which is 8 angulas, in the 'Śilparatna') it is also given as three quarter, or equal to the width ('Kāmikāgama', XXXI, 8 9, 'Kāśyapaśilpa', XXVI, 10) Compared with the Nidhikalaśa (p 112) it has half its width, acc to the 'Tantrasamuccaya', II, XII, 3-5 The 'Hayaśīrṣapañcarātra', XII, 268, describes it as 12 angulas wide and 4 angulas high

[90] 'Vaikhānasāgama', Ch VIII, and 'Mayamata', XII, 9-10, indicate 12 sizes, 'Kāsyapa silpa, XXVI, 9, describes the vessel of different size according to the height of the building ranging from one to sixteen storeys

According to 'Kāśyapaśilpa', XXVI, 10, and 'Mayamata', XII, 11-12, the width of the Garbhapātra is given with reference to the diameter of the pillar (anghri-viṣkambha) as being equal to it or narrower by an aliquot part

[91] Twenty-five (and not 100 abhikṛti) according to 'Īśāna-paddhati', III, Ch XXVII, 81, 'Mayamata', XII, 13, speaks of 9 to 25 compartments (9 16 25) or $3^2$, $4^2$, $5^2$ The height of the walls of these compartments is given in 'Mayamata', XII, 14, and their thickness is 2, 3 or 4 Yavas

[92] 'I P', l c, 73-74

[93] 'Kāmikāgama', Ch XXXI, 90 93 The 'Tantrasamuccaya', l c, follows the 'Viṣnu-samhitā' re the two lower castes, the casket is placed above the Pādukā for Brāhmanas, and on the ground for Kṣatriyas

[94] 'Īśāna-paddhati', III, Ch XXVII, 81-106, around the Brahmasthāna are the gods of the Vāstupuruṣamaṇḍala, which extends over the bottom of the Garbha vessel The distribution of the wealth of the earth is as follows precious stones in the centre, grains and pigments in the four directions, metals and various symbols in the eight directions, soil of different *provenience in the 8 directions and in the centre*, four varieties of lotus and Tagara (Tabernaemontana coronaria) in the four directions and in the centre, finally in the Brahmasthāna, (in the centre) the attributes of the God whose presence the temple enshrines, cf 'Mayamata', XII, 88

Brahmasthāna rest the symbols of God in the special manifestation in which his presence is invoked in the main image and in the temple itself

During a night which is in every way auspicious to the inception of the building, the Garbha vessel is lowered to the prescribed level of the foundation On its floor the Serpent Ananta, the Endless, is drawn On the hood of Ananta, the Garbha-casket has its place On the lid of the casket, on a square surface, the mandala of the Earth is drawn with its seven continents, seas and mountains The Casket as the goddess Earth contains all kinds of living beings, the moving and immovable, the Seed (bīja) and womb (garbha) of the building She is invoked and consecrated with the rhythmic incantation "O Thou who maintainest all the beings, O beloved, decked with hills for breasts, O ocean-girt, O goddess, O Earth, shelter this Germ (Garbha)" Earth is here the Bhūmi, the ground of being and becoming The Seed of the temple is laid in her in the centre[95] Its germination has been prepared in the rite of the sowing of the seeds and of the growing plants ((ankurārpana)

[95] The seed in the central compartment (madhyakoṣṭha) is "together with Bindu and Nāda" ('Kāmikāgama', XXXI, 26-30) It is the Seed of the Supreme Principle, in its triple aspect, as Bindu, the point-limit between the unmanifest and the manifest, which is beyond perception, as Nāda, in its subtle aspect as the basic substance or principial vibration, in its gross aspect, as Bīja it is the seed of everything

# V

# NAMES AND ORIGINS OF THE TEMPLE

मानं धाम्नस्तु सम्पूर्णं जगत्सम्पूर्णता भवेत् ॥

"If the measurement of the Temple is in every way perfect, there will be perfection in the universe as well"

'Mayamata', XXII 92

प्रासादं यच्छिवशक्त्यात्मक तच्छक्त्यन्तं स्याद्वसुधाद्यैस्तु तत्त्वैः ।

शैवी मूर्ति खलु देवालयाख्येत्यस्माद् ध्येया प्रथमं चाभिपूज्या ॥

"The Temple is made up of the presence of Śiva and Śakti and of the Principles and all Forms of manifestation from the elementary substance, Earth, to Śakti The concrete form of Śiva is called House of God Hence one should contemplate and worship it"

'Īsānasivagurudevapaddhati', Pt III
Chapter XII 16

# V

# NAMES AND ORIGINS OF THE TEMPLE

## THE NAMES

### 1 Vimāna

"Puruṣa bears the measuring rod (māna, from 'mā'), knows division and thinks himself composed of parts. Hence he is known as Mati" (Mind, 'Vāyupurāṇa', IX. 30-31).

To measure ('mā') is to make a thing by giving shape to it and existence. Māyā or manifestation means division of the hitherto undivided Principle, on itself it performs this operation and as Puruṣa it henceforth thinks of itself as composed of parts. Puruṣa who is the first form of the Supreme Brahman ('Śvetāśvatara Upaniṣad', III. 19, 'Viṣṇupurāṇa', I. 1. 2), thus bears the measuring rod. He is the great Architect of the universe and in this capacity his name is Viśvakarman.[1] He is as the God of Israel who has disposed everything—in the world, within ourselves and outside,—with measure, number and weight (Sap. XI. 20).

Manifestation comprises all that is seen; it has form, and is measurable; "all that can be measured is in the form of Umā and the measurer is the great Lord" ('Liṅgapurāṇa', LXX. 15). When Puruṣa thinks of himself, it is in the form of Umā, who shows by her name which is from the root 'mā' like Māyā, that she is the 'measured out', the manifest world come into existence by the thinking of Puruṣa. He thinks himself composed of parts while he is the measurer, the great Lord. Ontologically, the act of measuring his form is subsequent and refers back to his undivided presence; it is a reconstitution and similar to it in its purpose is the work of the architect. It is derived from His activity whose path 'measures' the wide heaven (AV. IV. 2. 3).

[1] 'Mānasāra', II, 2 5.

[2] 'Prakṛti' is Māyā and the Great Lord the Māyin, 'Śvetāśvatara Upaniṣad', IV, 10. In the 'Mānasāra', II. 2-35, it is said that the four progenitors and prototypes of the four divisions of architects are born from the four faces of Viśvakarman. They are Viśvakarman, Maya, Tvaṣṭṛ, and Manu. Their descendants are the Sthapati, the master builder; the Sūtragrāhin or Sūtradhāra who holds the measuring rod or line, the surveyor and draftsman; the Vardhaki, the builder and painter (from 'vṛdh', to make grow) and the Takṣaka, the carpenter, see Part I note 18.

'The word used here is 'vimāna', and it has remained one of the most generally accepted names which designate a temple Vi-māna, measured in its parts, is the form of God which is this universe, the macrocosm, and the temple as well, as a middle term made by man, the microcosm, according to his understanding and by measure To measure means here as much as to create, there is identity of measure and object[3]

The Sun measures with his ray the boundaries of heaven and earth (RV VIII 25 18)[4] Visnu measures the earth (RV VI 49 13, VII 100 4) To Varuna, the Asura, the measurer of the earth (RV V 85 5, VIII 42 1), belongs the line (Varunyā rajju)[5]

To measure is to order The order, which applies to the objects, is also within us, in the regularity of our breathing and the symmetry and proportion of our body In conformity with the order of the macrocosm, the microcosm lives, ascertains its order and makes it known by uttering it, in the rhythms of its movements and voice, the latter are the metres As the Gods have done, so does man, he builds and thereby gains the three worlds, knowing them rhythmically in their measured form and sequence Thus it is said in the 'Śatapatha Brāhmana' (VIII 3 3 5) "The metre measure (mā) is this terrestrial world, for this world is measured, the metre forth-measure (pra-mā) is the air world for this is measured from this world, the metre countermeasure (prati-mā) is that heavenly world, for that world is countermeasured in the air"[6] With this rhythmic formula (mantra) are laid down three layers of the altar (Agni), the fourth layer is the Brahman (Ś B VIII 4 1 3)

Rhythm evokes a reality and measure builds it up Whatever is produced is called 'meya' ('Samarānganasūtradhāra', IX 28) It is measurable, capable of being known, a quantity (gana, 'Ganitasārasamgraha', I 10-15)[7] Proportionate

[3] Gokarnasvāmin (Śiva) is called "the sole surveyor (sūtradhāra) in the construction of the Universe" in a grant of Devendravarman, of the year 254, 'Epigraphia Indica', XVIII, p 309

[4] The universe is measured by Savitṛ, the Sun (RV V 81 3) The sphere over which a god rules is commensurate with his activity

[5] Varuna's cord (Ś B I 3 1 14), in iconography, is shown as a noose It is the fetter, while the line is the measure of Time and Death

[6] The rhythmic formulae for the Bṛhatī and Vālakhilya bricks, are ('Taitt Samh' IV, 3 7 1) Thou art Earth metre (mā), Air metre (pramā), Heaven metre (pratimā) ) The Season metre, the Star metre, the Mind metre, the Speech metre

The inner rhythms of man and the worlds, and their presiding divinities Agni, Vāta Sūrya, the impelling and regulating agents in and of the special metre, are invoked in these mantras or rhythmic formulae which are addressed each to one brick, identified with the deity Mahīdhara, comm 'Vāj S', XIV, 18, explains Chandas, metre, as derived from the root 'chad', to cover Each brick, each building-unit is imbued with rhythm It is a charged and compelling weight and shape, in the hands of the builder

Cf Āp Ś S, XVI, 28 1 ff, the 12 mantras when laying the bricks in conformity with the golden Puruṣa

[7] Ganita, the science of quantities and their computation, mathematics, is applied to architecture, Vāstuvidyā, to Chandas, the science of rhythms, etc, to the dimensions of this earth, to the space world (the interspace, 'antarikṣa') and to the world of light and the gods, and to the configuration and destinies of the beings therein

measurement (pra-māṇa) is essential to the temple (vi-māna) and to the image (prati-mā) alike. They are 'made' by it to the same extent as the Vedic altar and also the Vedi. When the Vedi is outlined on the ground, with the tip of the wooden sacrificial sword, this rhythmic formula (mantra) is recited: "With the sacrifice's forth-measure (pra-mā), peri-metre (abhi-mā), counter-measure (prati-mā) and upward measure (un-mā), I comprise thee" ('Āpastamba Śrauta Sūtra', IV. 5. 4). Three fold and four fold measure is here meted out; it has direction and building power. It is the object, its energy and form. To have measured the measure, "so that one may not measure further, in a hundred autumns, not before" (AV. XVIII. 2. 38) means, that life has been lived consciously, adequately in every direction. "This measure (of life) man measures forth (pra), off (apa), apart (vi), out (nir), up (ut), together (sam), so that when he has measured it, it is said of him that he has gone to heaven" (AV. XVIII. 2. 39-45).

The temple is Vimāna, proportionately measured throughout, is the house and body of God. By temple is understood the main shrine only in which is contained the Garbhagṛha, the womb and house of the Embryo, the small, inmost sanctuary with its generally square plan.[1] All other buildings within the sacred precinct, are accessory and subservient to it: the hall, Maṇḍapa, in front of the entrance, is itself, as in Orissa, a semi-separate structure to which may be added several more such buildings preparing the devotee for the entry into the temple. These accessory buildings conform in each case with the proportionate measure of the temple, the Vimāna; the Maṇḍapa, generally, coalesces with the Vimāna.

Vimāna is the name of the temple built according to tradition (śāstra) by the application of various proportionate measurements or various standards of proportionate measurement.[2] The module is either purely architectural or being taken from the Liṅga or image in the Garbhagṛha is, in principle, common to the building, the main object of worship and the builder. The Vimānas are thus variously proportioned. This is explained in detail in the 'Matsyapurāṇa' and

[1] Garbha, however, is also commonly used in the sense of cell or separate room. Similarly too, the name Prāsāda, the other most important word for temple in common use, denotes a palace or palatial structure. In this [illegible] generally employed by the Buddhists in the Jātakas', etc., and also later in the 'Mahāvaṃsa', etc. References to these passages are given by A. K. Coomaraswamy in 'Early Indian Architecture: III. Palaces', 'Eastern Art', Vol. III. The ordinary designation of the separate room in a Prāsāda is Gabbha, ibid. p. 191. Gabbha denotes 'cell' in the cave inscription [illegible] note 102. To these words in their Pāli usage, correspond many others, such as Vedikā, [illegible], which here denotes any balustrade and not only one around a sacrificial platform (vedi).

[2] This definition is given in the '[illegible]', III. Ch. XXVIII, 2, and repeated in the 'Śilparatna', XVI. 2. Vimānam denotes as well a chariot of the gods, the sky-travellers (AV. [illegible] 4th Rock edict of Aśoka, cf. 'Arthaśāstra', II. 32. 10, 'devaratha') and a temple-construction, either of which are proportionate in their parts as laid down by tradition: 'Samarāṅgaṇa sūtradhāra', XLIX. 29; 'Vāl hamsa [illegible]', XLI; see also Part VII. Vimāna, in Buddhist texts, usually means a palace of the gods, cf. 'Mahāvaṃsa', XXVII. 10, 10, 17, where the Lohapāsāda is to be built 'like' a palace of the gods, or aerial palace ('dibba vimāna' or 'ākāsaṭṭha vimāna'), Coomaraswamy, l. c., p. 181. The 'Vimāna Vatthu' deals of the celestial abodes destined for different beings according to their merits. In the Epics, Vimāna means a seven storeyed building, acc. to the commentary ('Tilaka' of 'Rāmāyaṇa', II. 53. 3 and II. 57. 18).

The temple is the seat and dwelling of God, according to the majority of the names The name Prāsāda has the widest application [18] The word does not mean a house or something that is built up It denotes a settling down (pra-sad) and

Popular etymology accounts here for the meaning of the word Prāsāda Its more recondite but essential meaning is explained in the I P itself

The Amarakosa explains "Harmyādidhaninām vasāh prāsādo devabhūbhujām " Harmyas, etc are the residences of the wealthy , Prāsādas are the residences of gods and kings

[18] Prāsāda, in the sense of a sacred monument or sacred building is referred to in ancient texts and inscriptions 'Śāṅkhāyana Śrauta Sūtra,', XVI 18 13-17 Prāsādas on all sides of the Āhavanīya fire Patañjali, 'Mahābhāṣya', II 2 34 Prāsādas of Dhanapati, Rāma and Kesava The testimony of the Śrauta Sūtras and Gṛhya Sūtras is assigned to the Mauryan age (3rd century B C ), the date of Patañjali is about 200 B C

'Vedic Index', II 44, understands Prāsāda (Śāṅkh Ś S , l c ), as raised platform on a mound Prāsāda, in the sense of palace does not occur until the 'Adbhuta Brāhmana' , 'Weber, Indische Studien', I 40 , cf 'Vedic Index', II 51

In the Epics, Prāsāda has the meaning of "3 storeyed building" ('Rāmāyana', comm 'Tilaka', II 33 3 and II 57 18) It is compared with Mount Meru and the Vindhya Mountain (II 88 5-7 , IV 33 7) , it is very high and snow-white ('Rāmāyana', VI 26 5) Although of three storeys only its height need not have been less than that of the seven storeyed Vimānas The commentary 'Tilaka' (II 57 18), defines Prāsāda as palace of the king , in II 33 3, Harmya is thus defined, whereas in the latter passage, Prāsāda is explained as the house of the wealthy While neither Vimāna nor Prāsāda are used in the sense of temple,—the words designating the house and seat of God, not necessarily a temple but a sacred monument, in the Epics are Devagṛha ('Rāmāyana', III 55 7) and Devāyatana (I 5 10-15), Devasthāna ('Mahābhārata', Sabhā 46 34 , see also E Washburn Hopkins, 'Epic Mythology', pp 70-73)—their descriptions seem to imply a symbolic meaning The 3 storeys may denote the 3 worlds—earth, air and heaven ('Nirukta', VII 5) , the seven storeys, their seven fold division (RV VIII 40 5 , X 104 8) Re the 'whiteness' see Part IV, p 123 and re the designation 'Meru' etc , see Parts VI and VII

Further references to Prāsāda in the 'Mahābhārata' and 'Rāmāyana' are given by P K Acharya, 'A Dictionary of Hindu Architecture', pp 420-22 A number of inscriptions, of later ages, where Prāsāda means temple, are put together ib pp 423-30

Prāsāda, however, has retained the meaning of building or palace, in the 'Samarāṅganasūtradhāra', XVIII 22 , whereas in the many chapters of this text which treat of temple architecture the word which most frequently designates the temple is Prāsāda

Here are some of the earliest inscriptions On a Garuda pillar from Bhilsa, an 'uttama Prāsāda, of Bhagavat, 2nd century B C , J N Banerjea, 'The Development of Hindu Iconography', p 102 , Mathurā Jain Inscr , 'Ep Ind ', vol II p 198 , XI p 17

The 'Vejayanta Prāsāda', the Prāsāda of Indra, represented in a relief panel in Barhut ca 1st century B C and inscribed (Coomaraswamy, HIIA, Fig 43 , and 'Early Indian Architecture', 'Eastern Art', vol III, Plate XCII 1), is a 3 storeyed building, full of Apsarās, etc , in its hall on the ground floor , they look out from arched dormer windows or doors leading to the balcony, in the 2nd and the 3rd storey , the roof is waggon-vaulted Contiguous with the 3 storeyed building is a circular, open pillared shrine, with a round dome, and a separately projecting cornice below , the dome is inscribed "Sudhamma Deva-Sabhā"

'Prāsāda devālaya' occurs in the Nālandā stone inscr (vs 4 6) of Yasovarmmadeva, c 530 A D , 'Ep Ind ', vol XX p 43 Other inscriptions referring to extant temples (Prāsāda) and sites, are for example the one of the Lakṣmana Temple, Sirpur, (c 700 A D ), 'Ep Ind ', vol XI p 190 , or the Gurgi inscr of Prabodhasiva, 'Ep Ind ', vol XXII p 127

The 'Mayamata', II 6-7, enumerates the following buildings as Prāsādas Sabhā, Śālā, Prapā, Rangamandapa and Mandira , they are part of the whole establishment of a South Indian temple The meaning of Prāsāda is extended here from the temple itself (mandira) to the various halls, etc which are attached to it Cf however the meaning of Sabhā in the Barhut inscription

a seat made of that which has settled down and acquired concrete form, the form of a dwelling, a residence, the seat of God The rhythmic formula (mantra) which effects the settling, setting or steadying of the bricks of the Fire Altar is the Sādana mantra (Vāj S XII 53)[19] The meaning of Prāsāda is given explicitly in the 'Īsānaśivagurudevapaddhati', Part III, chapter XII, verse 16 "The temple, Prāsāda, is made up of the presence of Śiva and Śakti, and of the Principles and Forms of Existence (tattva) from the elementary substance Earth (Vasudhā) and ending with Śakti The concrete form (mūrti) of Śiva is called House of God (devālaya) So one should contemplate and worship it first "

This is in complete conformity with the meaning of the temple and the 'bricks' of which it is built They are imbued with the presence of Śiva and all the Principles of Existence [20]

The house of God (devālaya) is the concrete manifestation (mūrti) of Śiva or of any other name under which is beheld the Supreme Principle, to the same degree as the corresponding image (mūrti) The 'form' according to which either is made is Śiva as Prāsāda mantra[21]

An explanation of Prāsāda from the Śaiva point of view is given below, based mainly on the 'Īsānaśivagurudevapaddhati', a compendium dating from about 1000 A D

The rhythmic formula, the Prāsāda (mantra) is Nāda ('Tantrasamuccaya', I ch V 51, comm ) Nāda, the principial vibration, is the immanent cause (upādāna)), the primary substance of the world

[19] The 'sādanam' of the bricks of the Fire altar (Ś B VI 1 2 28, VII 1 1 30) is the prototype of the invocation of the goddesses, the Bricks (Part IV page 112), who are forms of Vāk

Prāsāda in Śāṅkh Ś S XVI, which is defined as 'raised platform', 'Vedic Index', II 44, as its name implies, is originally a 'seat' piled up, a Citi

The 'Nānārthārnava Saṃkṣepa', II sl 160 (T S S, p 25) says "The word Prāsāda is used in the sense of "well set" and "in the middle of the temple (mandiram)" , or it is its central part in which is the inmost sanctuary"

[20] The translations here and on p 130, intentionally use words somewhat different whose meaning may be inferred from the text —'Īsānaśivagurudevapaddhati', III ch XXVII 62 f, treats of the 'bricks'

The 'Agni Purāna', LXI 11, similarly says that the 'whole Prāsāda is to be understood as Puruṣa" , and "Lord Hari himself is visibly established in the Prāsāda" (26 b) See also 'Agni Purāna', CII 14 and CII 22-23

[21] The image of Śiva with 5 faces and 10 hands or as an alternate shape with four hands, is to be meditated upon as seated on a white lotus The image corresponds to the Prāsāda mantra The 10 hands on the right hold the following weapons, etc skullstaff, trident, spear, 'varada' and 'abhaya mudrā', which bestow boons and assure fearlessness , serpent, rosary, drum (damaru), lotus, and lemon (bījapūraka) on the left ('I P ', II ch XXVIII, 61 64, 'Tantrasamuccaya', Pt II VII 137) "He who does not know the Prāsāda, its great body of five mantras [pañcamantramahātanu ('Agnipurāna', CCXIV 40) , the 5 mantras are Īśāna, Tatpuruṣa, Aghora, Vāmadeva and Sadyojāta , (JISOA, vol IX, pp 174-75 , 193) together with the 38 Kalās (the 38 Kalās Ī P III ch VI 36 , 'Śāradātilaka', XVIII, 1-23 , see 'I P ', III ch XII 82, JISOA, vol X p 235, note)] cannot at all be called an Ācārya ('Agni Purāna', CCXIV 41) The five mantras are equivalent to the 5 faces, Īśāna, Tatpuruṣa, Aghora, Vāmadeva and Sadyojāta, of the image The principles of manifestation (tattva) are invoked on the image , they are allocated to its limbs and parts and are supported by them (see Part VIII)

The Supreme Principle, the Śivatattva, is Brahman which is bliss beyond the distinction of subject and object, knower and known, beyond time, undifferentiated, solid-Consciousness (cidghana) Śakti is not separate from Śiva, she is the energy or process of Consciousness with its willing, knowing and creating (Icchā, Jñāna and Kriyā Śakti) and leads from the unmanifest across the threshold of her own activity, where Śakti herself is Bindu, the point to the unmanifest, from here manifestation begins [22]

Bindu, the Point, is 'parā', beyond (the manifest), as well as 'aparā', manifest This latter aspect has two degrees, subtle and gross In its subtle capacity, Bindu is Nāda, the principial vibration, in its gross capacity, it is Bīja, the seed of everything Nāda gives Moksa, release, it is Śūnya, the Void ('I P ' part III ch VI 3 f) The High Point of the finial above the superstructure of the temple is the visual equivalent of Bindu

Śūnya, the Void, is Śakti as Kalā Śiva, pervades everything, is solid, undifferentiated-Consciousness, Śakti, as Śūnya, is vacuity-creating energy where things take shape and place as parts (kalā) of existence This is negativity as a function of Consciousness whereby its contents are made positive Prior to this function, which produces separateness and individuation, there is no thing in the beyond The presence of Śakti with Śiva is and produces all the Principles of manifestation from Earth to Śakti

The temple, Prāsāda, is the symbolic substance, which, as a substratum, corresponds to the principial substance and immanent cause (upādānakārana), Nāda, the principial vibration From Nāda, the principial vibration, the world is made This is shown by the rhythmical plan and structure of the Prāsāda Such is the meaning of Prāsāda, the most generally employed name for the Hindu temple It denotes especially the structural pile below, around and above the sanctuary (garbhagrha)

## FURTHER NAMES OF THE TEMPLE

Other words for Temple with a wide currency and generally employed are Devagrham, Devāgāra, house of God, Devāyatanam, Devālaya, Devakulam[23], meaning seat or residence of God, Mandiram, Bhavanam, Sthānam[24], Vesman[25],

[22] Somewhat differently worded, the 'Agni Purāna', CCXIV 33, says "by the recitation of the Prāsāda mantra, Nāda is roused"

Some Ācāryas consider Nāda, principial vibration, as the first among the Tattvas or principles of manifestation, and then Bindu, the point limit from where manifestation begins (kārya bindu , 'Tantrasamuccaya', part I, ch V 50, comm )

[23] 'Manu Smṛti', IX 280 (devatāgāra) , 'Gṛhya Sūtras', 'Śāṅkhāyana', II 12 6, etc , 'Pañcatantra', Bk I story I 27 f , "Śaila devagṛha" (a stone temple), Mora well inscription, 'Ep Ind ', XXIV p 194 Devakulam, Bhāsa's 'Pratimānāṭaka', III , 'Ep Ind ', XXI p 81 (Gupta inscr ), is a small shrine, cf 'Temple, Door, Throne, etc ' by St Kramrisch, JISOA vol X pp 210 ff

[24] Mathurā inscriptions, 'Ep Ind ', I p 390, No 18 , 'Indian Antiquary', XXXIII, p 102,

meaning waiting or abiding place, dwelling, abode, station or abode, entrance or dwelling, respectively, Kīrtanam[26], Harmyam (from 'hr', to take) a palatial building and Vihāra (also from 'hr', to take asunder, 'vi-har', to construct)[27]

A seat and house of God is the temple by most of its names The names Caitya and Ksetra, however, the Hindu temple has inherited from the sacred ground in the place of which it was to arise and from the piled up sacred monument

In Vāstu-Śāstra, the synonyms are listed and throw some light on the multiple origins of the Hindu temple[28] The 'Samarānganasūtradhāra' (XVIII 57), gives the following names to the place for the gods (1) Deva-dhisnya, (2) Surasthāna, (3) Caitya, (4) Arcā-grha, (5) Devatā-āyatana and (6) Vibudha-āgāra They designate (1) a seat[29], (2) an establishment, (5) a residence and (6) a house[30] of god (deva, sura, vibudha), whereas Arcā-grha is the house of the consecrated image, and Caitya is a sacred monument which is piled up like the Vedic Agni (citi) These are ancient names

No 13, also 'Ep Ind', vols VI p 202, IX p 240, JBAS vol XLII part I p 130
Sthāna, (Brahmasthāna, Mbh III 84 103), "Mahāsthāna", 'Ep Ind', XXIV p 210

[25] 'Ep Ind', vols IX p 254 (Pathari stone inscr V S 917), III p 15 (Śrīrangam inscr, about 1250)

[26] Nālandā inscr of Yasovarmmadeva about 530 A D (verse 13), 'Ep Ind', vol XX p 43, Lakha mandal inscr, about 500 A D, 'Ep Ind', I p 15; copperplate inscr, referring to the Kailāsanāth temple at Elura, 8th century, 'Indian Antiquary', vol XII, pp 229, 289, Khalimpur plate from Malda, Bengal, 9th century, 'Ep Ind', vol IV p 239, Brahmā temple at Dudahi, ASI Report, vol X

Kīrtanam or Kīrti is a temple or any work of art by which the builder praises the glory of the Lord and through which he attains fame (cf Kīrtistambha), see also Part I, note 17

[27] "House of the wealthy" acc to 'Amarakosa' (see also note 17), Mathurā inscr, 'Ep Ind', vol IX p 241, vol XXII p 124 (inscr of Visnu temple at Bayana, Bharatpur, dated V S 1012)—Harmyam and all the other more frequent names occur in early and late texts and inscriptions

Harmya is also the name of the 'upper floor' (uparibhūmi, 'Samarānganasūtradhāra', XVIII 10) Harmya also designates the 'High Temple' (Parts VI, VIII, 'Śilparatna', XVI 53)

Harmikā is the small square shape on top of a stūpa

Vihāra is originally the sacrificial ground (Kātyāyana, I 8 26) It is the space between the sacred fires —A Burck, ZDMG 1902, on p 307, "The 'Āpastamba Śulva Sūtra'" translates 'vihāra' as 'method of construction' (of Vedi, Agni)

Vihāra generally designates a Buddhist monastery In a Jain inscription from Jalor, 1186 A D, Vihāra refers to a temple of Pārsvanātha ('Ep Ind', XI p 55)

[28] The 'Mayamata' (XIX 10-12), gives the following 29 synonyms used for a building (1) Vimāna, (2) Bhavana, (3) Harmya, (4) Saudha, (5) Dhāman, (6) Niketanam, (7) Prāsāda, (8) Sadanam[29], (9) Sadma, (10) Geha, (11) Āvāsaka, (12) Grha[30], (13) Ālaya, (14) Nilaya, (15) Vāsa, (16) Āspada, (17) Vāstu, (18) Vāstuka, (19) Ksetra, (20) Āyatana, (21) Vesma, (22) Mandira, (23) Dhisnyaka, (24) Pada, (25) Laya, (26) Ksaya, (27) Āgāra, (28) Udavasita and (29) Sthāna Many of these are synonyms used for a building or for house in general and the numbers 2, 6, 8, 9, 10, 11, 12, 22, 23, 26, 27, 28 (vāstu) and (8) (samsthāna), accord with those enumerated in the 'Samarānganasūtradhāra', XVIII 8 9, where the appelations are given denoting a house or building But for Tala and Kāstha, the 24 synonyms of the 'Mānasāra, XIX 108-12, occur in the list of the 'Mayamata' whereas the names Samsraya, Nidhanam, Nīdam, Śaranam, Okah and Pratisraya are found in the S S, l c

## THE OBJECT IN BUILDING A TEMPLE

"Let him who wishes to enter the worlds that are reached by sacrificial offerings and the performance of religious obligations (istāpūrta) build a temple to the gods, by doing which he attains both the results of sacrifice and the performance of religious obligations" (Br S LV 2)[31] The commentary explains that sacrificial fire offerings are called 'ista' and all other offerings are 'pūrta' The latter include the construction of tanks, wells, lakes and houses of the gods (devatāyatana) The sacrificial offerings secure for the sacrificer a place in heaven (svarga) according to the merit of his sacrifice The Yajamāna, the sacrificer, is the donor of the temple, his sacramental person, transformed by his sacrificial and other offerings is transferred to heaven The duration of his stay there is permanent (nitya) according to Kāśyapa, quoted by Utpala, the commentator of the 'Bṛhat Saṃhitā', this is secured by the enduring nature of the shrine Essentially, the acts and rites in building the temple are sacrificial[32] With these go lasting concrete and beneficial results embodied in the building, active in all the planes into which the temple symbolically reaches both in this and the other worlds [33] Where the Fire-altar, Agni, acted mainly as instrument and sacramental

[29] The Sasbahu Temple (Gwalior) is called Hari-sadanam, Sadanam of Viṣṇu, in the inscription of Mahīpāla (A D 1093), 'Ind Ant', vol XV p 33, cf Ś B VI 1 2 28, note 19

[30] Devagṛha, however, is not only a house of God on earth, it is also the name of the luminaries, the abodes in the firmament of those Ṛṣis, etc who attained Deva-hood by their Karmas The stars and the luminous spheres in the firmament are Devagṛhas, 'Matsyapurāṇa', CXXVIII 39-41 Cf also the meaning of Vimāna as 'prototype' of the temple, Part VII

The other names which have not been explained as yet, denote Saudha, a plastered, palatial building, Dhāman, a residence, Sadanam and sadma are from the same root 'sad' as Prāsāda, 13, 14 and 25 Laya, Ālaya and Nilaya, a place of rest, a residence, 16 and 24 Pada and Āspada, a station, 15, 17 and 18 Vāsa, Vāstu and Vāstuka from 'vas' (pp 82 3) and 19 Kṣetra, sacred ground and abode (see note 28)

The 'Kāśyapaśilpa' (XXIII 1), enumerates as synonyms Prāsāda, Sadanam, Sadma, Harmyam, Dhāman, Niketanam, Mandiram, Bhavanam, Vāsa, Geha, Divya-Vimānaka, Āsrava, Āspada, Ādhāra and Ādhārapratidhiṣnya Āsraya, Ādhāra and Ādhārapratidhiṣnya signify the support which the temple, being a seat, gives to divinity

[31] Kern translated, l c "meritorious deeds of piety and charity", a Christian interpretation, Iṣṭa, derived from the radical 'Yaj', the commentary explains are Yajña, that is offerings through fire See Sāyana's commentary on RV X 14 8

[32] One of the main sacrifices being the Vāstu-homa

[33] "For the purpose of increasing the religious merit of his parents and of himself" says the Gwalior stone inscription of Mihiragula, was the stone temple (sailamaya Prāsāda) of Sūrya set up here ('Corpus Inscriptionum Indicarum', vol III p 162) For such reasons also, the 'Agnipurāna' ch XXXVIII 25-26, says "having got wealth by luck or exertion one should give it in the proper way to the best among the twice-born and cause temples to be constructed" In the same chapter it is also said that a poor man building the smallest shrine reaps the same benefit which a rich man does by building the largest temple (XXXVIII 10-11)

This is in general the stated purpose, the temple by the symbolism of its architecture gives to it a detailed and definite exposition

body of the sacrificer for the attainment of his ultimate purpose, the temple ostensibly stays as a monument of its function Its permanency depends upon its substance and on many factors which work on the monument while it stands, and affect it in time

Other factors, of the period and place influence it, while it is being built and leave their mark on its style Whereas temples are built in differing styles, the Fire-altar is subject to no such variation, its shape is independent of time and place, independent even of extensiveness, so much so that one of the types of the Vedic Altar is prescribed to be made of rhythms only (chandaścitı) and not of bricks which are their representatives[34] Ancient extant temples and preserved texts date from about the same age[35] In the northern half of India it coincides with the rule of the Gupta Dynasty The 'Brhat Samhitā' and the 'Matsya Purāna', the former of the sixth century A D refer to the standard works on which they are based Varāhamihira, the author of the 'Brhat Samhitā',

[34] 'Baudhāyana Śulva Sūtra', II 62-86, "In the case of the Chandascıtı, the Agnicit, the builder of the Fire-altar, draws on the ground the Agni of prescribed shape He then goes through the whole prescribed process of construction imagining all the while that he is placing every brick in its proper place with the rhythmic formula (mantra) that belongs to it The mantras are recited but the bricks are not actually laid The Chandascitı thus is the Citi or altar made up of Chandas, rhythms, or mantras instead of bricks or loose mud pieces (B B Dutt, 'The Science of the Śulba', p 3, note) —Cf the 36,000 Fire-altars made of mind, speech, breath, etc, 'Vedānta Sūtra', III 3 44 (Śankarācārya's comm )

The rhythmic formulæ, the mantras however, even mentally recited, are extended in time This time is not the dated time of history It has its architectural analogy and notation in the Talacchanda, the ground plan of the temple (Pt VII)

An apparent exception to the aloofness of the Vedic altar from any geographical or ethnical factor is given in Ś B XIII 8 1 5 (note 60) The northerners and easterners had round sepulchral mounds in contradistinction to those who knew the Three Vedas and whose sepulchral mounds were square This is but an application of the supremacy of the four cornered shape, a lesser value is assigned to the circular shape

[35] The 'Grhya Sūtras' refer to the shrines of gods as 'devagrha, devakula', also 'devāyatana' (cf note 23) The 'Āpastamba Grhya Sūtra', VII 20 describes the carrying about of images by the house-holder and the placing of them in huts built for them The 'Adbhuta Brāhmana' (Saḍvimsa Brāhmana, X 5) speaks of 'devāyatanam' which may, but need not mean a temple

Temples, under the control of Government are mentioned by Megasthenes

Re remains of temples such as foundation walls only, see Part IV

Representations of temples, abound in reliefs at Barhut, Sāñcī, Bodh-Gayā, Mathurā Shrines are also represented on a few coins prior to and at the beginning of the Christian era (J N Banerjea, 'The Development of Hindu Iconography', Pl I, Fig 16, see note 89, Coomaraswamy, HIIA, Pl XXX, Figs 116, 117, 126A) These early representations of various types of shrines do not correspond, as a whole, to the actually preserved temples of subsequent ages, although in some of their parts there is continuity and development Some of the early types of temples, however, such as those on the Audumbara coins of the Punjab have their structural equivalent in Bengal temples of the present day

'Shrines' (koṣṭhaka, apartment, separate chamber or place) of Aparājita, Apratihata, Jayanta, Vaijayanta, Śiva, Vaisravana, and the Asvins in a fort, and the house (grha) of the goddess Madirā, and "koṣṭhaka-ālayas" for the Vāstudevatās are spoken of in Kautilya's 'Arthasāstra', II iv (56) which, according to A B Keith seems to belong to the fourth century A D ('The Age of Arthasāstra', 'B C Law Volume', p 490)

concludes his chapter on the Description of Temples (prāsādalaksanam) with the modest statement that it is a brief summary of the work of Garga, and that reference has been made in it also to the elaborate treatises by Manu and others (ch LV 31) Elsewhere (29 f ), in the same chapter, Maya and Viśvakarman are quoted as authors whose seemingly different statements have the same meaning The body of architectural knowledge behind the short compilation of the 'Brhat Samhitā' is supported by the names of eighteen chief preceptors (ācārya), of the traditional science of architecture, Vāstusāstra, listed in the 'Matsyapurāna'[36] The many names seem to indicate an equal number of branches or schools of Indian architecture prior to the sixth century A D and subsequently The reconciliation of apparently conflicting statements about proportionate measurement (Br S LV 30) can be taken as symptomatic of the diversities of the schools and their exponents[37] They represented as many variations as lay within the fundamental purpose of the temple The merit of the works of the schools which made it seem worth while to record the names of their most eminent preceptors lay in the manifold and ever varying solutions of their central purpose This was the setting up of the Prāsāda as Vimāna, proportionate in its parts and directing the form and measure of all the other buildings which accrued in the service of the Prāsāda

The diversity of the types of temples at one and the same site even may be seen for example within the enclosure of the temple of Makūteśvaranātha, near Bādamī, in the Bijapur district The widest range to which the architecture of the Prāsāda attained in the tenth century in northern and southern India is also represented by these early shrines The temple dedicated to Śiva Makūtesvaranātha was built in the sixth century[38]

[36] The names of the 18 great architects are enumerated in Chapter CCLII, verses 2-4 They are Bhrgu, Atri, Vasiṣṭha, Visvakarman, Maya, Nārada, Nagnajit, Visālākṣa, Indra, Brahmā, Svāmīkārttika, Nandīsvara, Śaunaka, Garga, Śrī Krṣna, Aniruddha, Śukra and Brhaṣpati To Visvakarman, Maya and Garga, are attributed definite statements by Varāha mihira Besides these three Ācāryas, others too, of whom nothing is known as yet but their names, are relied upon in the texts on architecture The number 18, of the great architects is also the number of Purānas, and of the places (sthāna) of calculation ('Visnupurāna', VI 3 4, 'Vāyupurāna', CI 102 f )

[37] The structure of the temple is a work of art and science Their knowledge and practice are conducive towards the same end, the making of a perfect instrument whose sight and ritual use procure release

Hiuen Tsiang (S Beal, 'Records of the Western World', I p 78) speaks of 5 Vidyās or Śāstras, traditional sciences, the second of which is Śilpasthānavidyā As the name of this science indicates, it included the arts (silpa) and architecture (sthāna , houses, squares, courts etc ) and mechanics , it explains the principles of Yin and Yang and the calendar

In the 'Śukranītisāra', IV 3 30, also, Śilpasāstra, enumerated as one of the 32 sciences, includes architecture and the making of images Architecture, moreover and painting (ib 83-84) are enumerated by Śukrācārya amongst the 64 arts (kalā) , and architecture (vāstuvidyā) and sculpture (takṣakarma) are similarly enumerated in Jayamangala's commentary to Vātsyāyana's 'Kāmasūtra', Ch I 3 (see Part I, note 20)

The double listing as science as well as art of architecture and sculpture does justice to their two-fold nature This is also implied in architecture being part of Jyotiṣa (astrology) and Kalpa (ritual), two of the six Vedāngas (See Part I, note 21)

[38] An inscription dated 601 A D and found on the site, engraved on a pillar, speaks of this temple (devagrha) It is a storeyed building crowned by a dome shape Other temples

In the Hindu temples, such as they are known, and for which the texts lay down rules, the Prāsāda is the shell of the Garbhagṛha The Garbhagṛha is essentially a small dark chamber, square in plan[39] In this respect it is unchangeable throughout the ages The problems of architecture, developed in the West, to build a space resonant with the rhythm of the prayer and concentration of an assembled community, remained outside the Prāsāda The Hindu temple is built with the fervour of devotion (bhakti) as a work of offering and pious liberality, in order to secure for the builder, a place in heaven, which means a high level of inward realisation and to increase the religious merit of his near relatives by a transfer of merit, the Prāsāda functions similarly, for every devotee, who comes to and enters the temple The temple is built as a work of supererogation, with the utmost effort in material means and the striving of the spirit so that the Prāsāda attains and leads to the Highest Point[40]

Congregational worship has no place in Hinduism[41] It determined however the apsidal plan of the barrel-vaulted Caitya-hall, the Buddhist temple The resolve to build and generally also the funds for the building were the contribution of the Yajamāna or Kāraka and he entrusted the work to priest and craftsman The merit of their knowledge came back to him who had employed, remunerated and then dismissed them[42]

within the enclosure have superstructures of a different type, curvilinear and also in the shape of a stepped pyramid—see Part VI, and H Cousens, 'The Chālukyan Architecture', op cit, Pls XXVI, XXVII

[39] Or, rarely, rectangular and still less often, polygonal or circular, cf the shape of sacrificial altars, Part II

[40] The liberating effect in building a temple is expressed in the 'Sarvāgamanibandhana', XIII, second but last verse (a Ms from Tripunithura, cited without translation, by N V Mallaya, 'Studies in Sanskrit Texts on Temple Architecture', JAU vol IX p 172) It says that he who builds a temple of Śiva leads his ancestors of 21 generations to the world of Śambhu (Śiva)

In the 'Mahānirvāṇa Tantra', XIII 240 44, the Temple is praised "Thou grantest merit (puṇya) and fame , all the holy places are in thee " The temple, like worship itself, serves more than one purpose "One should worship with Sattva tendencies [in conformity to the Essence] for liberation, with Rajas tendencies [expansively] for enjoyment and with a mixture of these tendencies for the fulfilment of mixed purposes" ('Viṣṇu Saṃhitā', IV 12)

[41] The single worshipper, or in South India, only the priest of the temple and the 'pūjārī' enter the Garbhagṛha and perform the sacred rites for the worshipper

When, as with the Vaiṣṇavas, congregational songs, etc, are performed, this takes place in front of the Garbhagṛha, in the Maṇḍapa, and leaves unaffected the form of the Prāsāda, with its small Garbhagṛha

The apsidal plan and barrel-vaulted structure is classified as Hastipṛṣṭha or 'elephant-back' in Vāstu sāstra (see Part VII) It was re adjusted for the purposes of Hindu worship by the introduction of internal walls so as to seclude the Garbhagṛha from the rest (Durga temple, Aihole, 6th century, Cousens, op cit Pl XI) or by a flat stone ceiling to exclude the vaulted roof in the brick temple of Kapotesvara at Chezarla, Guntur District (Report of the Southern Circle, ASI, 1917-18, p 35, Pl XVIII)

[42] The Sthapati, the master builder, himself a Śilpin, is the Guru of the three other classes of Śilpins, the Sūtragrāhin, Vardhakin and Takṣaka In the performance of certain architectural rites the Sthapati may officiate as priest ('Mānasāra', VIII) In these, as well as other, prescriptions there is no absolute or dead uniformity in Vāstuśāstra (see Part I p 9) The Śilpin is the Kartṛ in relation to the Kāraka, the patron

To the pilgrim and devotee who goes to the temple, it is a Tīrtha made by art, as others are by nature, and often it is both in one A Hindu temple unlike the Vedic altar does not fulfil its purpose by being built, it has of necessity to be seen Darśana, the looking at the temple, the seat, abode and body of divinity and its worship (pūjā), are the purpose of visiting the temple To fulfil this purpose in addition to being an offering and work of pious liberality the temple has not only its proportionate measurement but also the carvings on its walls, and the total fact of its form

The Prāsāda as far as preserved temples show, consists of thick walls and a roof forming a dark square chamber entered through a door with a more or less elaborate frame Whereas in the later temples the superstructure is raised to

When the building of the temple is completed, the Sthapati prays that the people be 'healthy, wealthy, happy, well known and famous for a long time and that the victorious king protect the whole earth, full of cattle and plants' ('Īśānaśivagurudevapaddhati', IV Ch XXXIV 51)

The relation between a definite type of temple, its patron and architect is illustrated by verses 35 43, Ch LVI, of the 'Samarāṅgaṇasūtradhāra' "Meru, the Lord of Prāsādas, as described in this chapter must be built by a Kṣatriya only and the architect should be a Vaiśya or he may also be a Brāhmana, versed in Vāstu-śāstra A Kṣatriya, however, though versed in Vāstu-śāstra must by no means be the architect " Re the King as patron of the Meru, see the inscription, Part V, note 78

The craftsmen were members of a guild or feudal servants of the king or the chieftain of a temple, cf Coomaraswamy, 'The Indian Craftsman', 1909, passim

The "Sarvasiddhi ācārya", however in an inscription from the Pāpanātha temple at Paṭṭadakal (after 650 A D ) was not "a guild" Caṭṭara Revaḍi Ovajja, the builder of the Pāpanātha temple was given the title of Sarvasiddhi Ācārya Another Sūtradhārī, of the southern country, named Guṇḍa, the builder of the Virūpākṣa temple at Paṭṭadakal, was given the title 'Tribhuvana ācārya', ('Indian Antiquary', Vol X pp 162, 165, 170 where an erroneous translation is given of Sarvasiddhi Ācārya)

The hereditary transmission of architecture is well illustrated by an inscription in the Jagannātharāya temple in Udaipur, Rajputana, of the year 1653 A D Its architects, Sūtradhāra Mukunda and his younger brother Bhūdhara, belonged to the family of architects known as Bhangora Their ancestors came to Mewar from Gujerat, about 1389 A D and were the chief architects of the rulers of Mewar since then This is stated in a record in the possession of their descendant, Bhanwaralal, from where the above account was published in 'Epigraphia Indica', Vol XXIV, p 56 To this family of architects also belonged Mandana, who built the Kīrtistambha at Chitor (1440-48 A D ) and who was the author of the 'Vāsturājavallabha', Rūpamaṇḍana', and other works on architecture and iconography

The connection of the craftsmen with the temple was not only for the purpose of work on the completion of which the architects received their remuneration and presents, such as gold, etc (Part VIII, last chapter), or a village ('Ep Ind ', l c ) The guilds of the architects (sthapati) and potters, for instance, levied a small cess on every one of their members, working at a particular temple, when a donor intended to make a permanent provision for the maintenance of the temple or the supply of materials for the worship of the deity (Kaman inscr of about the eighth century , 'Ep Ind ', XXIV, p 329)

The Indian craftsmen, it is generally believed, were anonymous Many however signed their names and some even proclaimed the pride which they took in their work in inscriptions like the one from temple No 9 in Aihole (Fig in Part VI) of about the 7th century "There has not been, and there shall not be in Jambudvīpa any expert (vidvān) in the art of building temples (vāstu-prāsāda) equal to Narasobha" ('Indian Antiquary', Vol IX, p 74, Cousens, 'The Chalukyan Architecture', p 44)

great height in one form or another, towards its culminating point, in the earlier of the preserved shrines the roof is also flat A raised plinth or terrace is a substructure of the body of the temple and frequently accommodates a path of circumambulation In this its simplest and indispensable form, the Garbhagrha is embedded in thick walls, if it has as is the rule, a high superstructure, it carries upward the architectural theme of the walls from which it arises Their ever more complex articulation serves as ever more explicit exposition of the meaning of the temple in many figures, each with its name and place in the body of the building

# ARCHITECTURAL ORIGINS

## 1 Citi, the Altar

Consistent in its completeness and appearance, the Prāsāda is yet not of one origin as is the Vedic altar Its socle or 'base' (adhisthāna, pītha, etc ), the covered and enclosed chamber (garbha-grha) and its superstructure, the support of the finial, are the three main architectural parts in the vertical direction, each of which refers to a different source[43] Yet so thoroughly were these parts amalgamated that they constituted the Hindu temple throughout India for about a millennium and a half in preserved structures, a continuous sequence of forms in the various provinces to which each has given its particular impress, whether in its most imposing monuments or unassuming wayside shrines

A temple may be approached through one or several, carved and pillared halls, and it may be surrounded by subsidiary shrines and buildings, it may be the centre of an entire temple town, with walls and gate towers, itself of great height and many storeys Yet the constituent parts of the Prāsāda and its Garbhagrha remain the same[44]

On the massively packed socle (pītha), alike to the altar, the Citi, which is piled on the ground or Vedi, rest the walls (bhitti) of the Garbhagrha Their lowermost part is also called Vedi or Vedikā[45] It has a number of horizontal

[43] The superstructure, of many origins and the most prominent part of the complete temple, seen historically, is not indispensable Flat roofs (chādya), however, do not belong to the perfect, i e , complete, type of a Hindu temple , they show it in its making and are separately dealt with in Vāstusāstra (see Part VII) Another type of temple, illustrated in the reliefs of Barhut, etc was known in various types by 100 B C approximately This was an open pillared hall, rectangular or round, with or without a second storey, and always with a sloped roof, either in the shape of a dome, or of a vault, etc The forms of parts only of this open, pillared temple, built in the main of wood, were integrated in the Hindu temple as represented by preserved structures

[44] The small space within the cube of its walls, the Garbhagrha, is the most elementary of the ancient and preserved types of temple, in India It was used by Hindus and Buddhists in the Gupta Age, as far as monuments exist to-day, and by aboriginals, at any phase of their megalithic or generally pre historic, non-historic, undated mode of worship The socle is known as Adhiṣṭhāna in South Indian texts, 'Tantrasamuccaya', I, II, 37 , 'Kāśyapasilpa', X, 1, and as Pītha, in the 'Samarānganasūtradhāra', LXI South Indian texts use also the following synonyms Masūraka, Ādyanga, Kuṭṭima, Vastvādhāra (I P III, Ch XXX 66)

In Orissa, the lowermost part of the wall is called Pābhāga (N K Basu, op cit p 184) the foot of the wall It corresponds to the Vedikā The socle there is called Pista (pītha)

The entire structure moreover of certain temples rests on a wide terrace (Kaṭi, Jagatī , Pl I , Part VII, first chart, and note 21) and more than one building may rise from one and the same terrace Another name of the Jagatī is Pīṭhika or Jagatī-pītha ('Samarānganasūtradhāra', LXVIII 4 and 35) After the planning of the temple, with its ground plan (samsthāna), vertical section (unmāna) and its special architectural form (lakṣanīni) the Jagatī should be devised correspondingly (cf ib 12) Its width is given in proportion to that of the Prāsāda , assuming the latter to be 8 padas it is 28 padas (Ch LXIX 41-42) or, in another

mouldings, they continue the theme of the Pītha or socle with its horizontal mouldings Below the socle moreover a sub-socle or pedestal (upapītha) is piled in some temples and adds to their height In these lower parts of the temple, the pedestal, Adhisthāna, the socle, and the Vedikā is embodied the memory of the sacred ground (vedi) with its piled altar (citi) whence the sacrificial offerings were carried up by the flaming fire The place of the flame is now taken by the structure on its socle, it arises with perpendicular walls and a pointed superstructure Neither the form of the socle with its horizontal mouldings nor that of the temple on it imply a derivation from the form of the Agni or its flame, but it is the knowledge of these rites which survives in architectural forms Even in some of the last buildings in which a living tradition was at work, such as the temple of the Sun at Konārak in Orissa (thirteenth century), or its contemporaries in Mysore or in a twelfth century temple in Rajputana, and in earlier temples in Central India, Rajputana and Gujerat, the memory survives, on the walls of the socle and the Vedikā, of the substance of which the altar was built, wherein had been placed the heads of the sacrificial victims, man, horse, also the Śarabha ('Aitareya Brāhmana', I 6 8 6), and the other 'animals' It was cemented with a mixture to which these sacrificial animals had contributed Rites are remembered and, as it were, crystallise in this instance on the surface of the temples in the shapes of men, horse, other animals and the Kīrttimukha, which are carved in horizontal bands around their socle [46] The living memory of the Fire Altar however has not only remained at the

instance (ib 52-53) 32 padas, the width of the outer path for circumambulation (bhrama) of the temple is given as 4 padas

[45] As a railing fences in the sacred ground, so does the corresponding portion of the wall (vedi, vedikā) of a structure In this sense it is an 'enclosing' wall (Coomaraswamy, 'Yakṣas', Pt I, p 22) The term Vedi is thus not used for a definite architectural shape, it indicates its relative lower position in the whole structure It denotes also the lower portion of any vertical unit, such as those of the Bhūmis or storeys, ('Samarānganasūtradhāra', LXII, 'Mānasāra', XXII) Vedi is also the name of the highest part of the trunk of a North Indian Śikhara, the superstructure of the temple In this application the meaning of sacred ground or altar prevails On this 'High Altar' is placed the finial of the temple (see note 47) The name for the enclosure or enclosing wall around the whole sacred precinct, etc is Prākāra

[46] Adhiṣṭhāna is usually translated as base If there is an Upapītha, the Adhiṣṭhāna is above it, so to be accurate, it cannot be rendered as "base" The word means "a stand" and is translated here as "socle", the Upapīṭha or pedestal is an optional member of the temple, whereas the Adhisthāna is an essential part, Orissan shrines however are generally without it

Two types of figures are to be discerned on the socle, etc and vedikā, either a row of heads only or of whole figures, the latter are shown in motion, each with its own particular activity and movement Horses run, men make war, or love, etc, they are restored to their own sphere of activity in this Samsāra (see Part VIII) at the base of the temple Memory is embodied in traditional, sacred architecture does not mechanically repeat former contents, they are remoulded with every remembrance Hence, not only their variety, but also their manifold substitutions The 'heads' of the various animals are summed up by one kind of head only, that of the Face of Glory, the Kīrttimukha, the Grāsa, for instance on the Devī Jagadambā temple, Khajurāho, etc In Ramgarh (Kotah State) the following are carved on successive fillets of the socle, in vertical succession (1) Kīrttimukha, (2) Elephant, (3) Lion, (4) Horse, and (5) Man In northern Gujerat, the face of the socle (pītha) is carved with a series of enrichments of its horizontal fillets the Grasapaṭta, with the head of the Kīrttimukha, in ceaseless repetition, the Gajathara, the elephant course, which is not essentially present, the Asvathara and Narathara, courses of horses and of men respectively (J Burgess—H Cousens,

bottom of the temple, where the Vāstupurusamandala represents its main residue, coterminous as it is actually or in principle with the Vedi, the total site, or with the extent of the Prāsāda Reiterated in name, elevated in position and meaning, on a higher level of the temple, once more, the name Vedi is given to the upper portion of its superstructure, the Śikhara,[47] on which is placed its crowning part the Āmalaka and then the finial This Vedi may be called the Uttara Vedi of the temple

On the Vedi of the site, on the sacrificial ground, the raised 'altar' of the temple, its socle, etc and Vedikā, with their mouldings are the firm and horizontal theme and basis from which the building of the temple arises, dedicated as an offering When this offering is built up and about to reach its end, once more, in a supreme effort, the final offering is made on the high Vedi, the upper portion of the massive pile of the superstructure, above it are the Āmalaka or the High Temple,[48] and the finial above these

The Vedic altar survives in the structure of the body of the temple, in its lowest and its highest part In technique and name the Prāsāda, the Hindu temple, shares in the name of the Vedi and Citi Its total structure moreover, when seen from outside has the appearance of a massive pile, and is a monument more than a building The thickness of the walls of the Garbhagrha, and the often nearly compact superstructure, also reveal that the entire Prāsāda is a Citi [49] This is

'Architectural Antiquities of Northern Gujerat', ASWI vol IX p 25), cf also the Pīṭha of the Somesvara Temple in Kiradu, Mewar, Rajputana, 11th century

In Thoda, a frieze of Haṃsas is added on the top of the others (ASI Vol VI p 124), Rows of Hamsas and Makaras are frequent also on the socles of temples in Mysore The Kīrttimukha or Grāsa and the face of the Śarabha are the same type (see Part VIII) Makara and also Haṃsa belong to the imagery of the Kīrttimukha

[47] The Vedi or Vedibandha is one quarter of the height of the Śikhara This refers to the curvilinear Śikhara in the early texts 'Matsyapurāna', CCLXIX 15-20, 'Garuda Purāna', I XLVII 1-5, 'Agnipurāna', XLII 17-18 and CIV Other proportions are given in the 'Matsyapurāna', ib 8-14, and in later texts (Part VII) Vedi is also the name of the respective portion of a Rekhā temple in Orissa, N K Bose, 'Canons of Orissan Architecture' p 92

[48] Re Āmalaka, see Part VIII Āmalaka is a flattened cogged stone, Re the 'High Temple', see Parts VI and VII The Āmalaka and the cupola (Śikhara) of the High Temple are equivalent 'crowns' of the superstructure Meaning and origin of the Āmalaka are more complex than that of the High Temple (Vimāna, harmya) The Āmalaka is generally placed above curvilinear northern Indian Śikharas, the High Temple (vimāna) above the Bhūmis or storeys of the pyramidal superstructure of South India The High Temple is a miniature shrine, solid and having a massive domed roof (called "Śikhara"), it was a domed shrine originally

[49] The walls occupy three quarter of the total area of the temple ('Matsyapurāna', Ch CCLXIX, 1 ff)

In later temples, the walls are built in two shells, their interior is solidly packed with horizontal blocks of stones, laid in courses (M M Ganguli, 'Orissa and Her Remains', p 145) or the space is filled with loose boulders or dry rubble (H Cousens, 'Mediaeval Temples of the Dakhan', p 6), etc These replace the almost 'cyclopean' walls of the temples preserved from the 4th to the 9th centuries

No reference is here made to the double walls, with an inner Pradakṣinā, Andhakārikā, or ambulatory of the temple type called Sāndhāra, see Part VII

In brick temples, the massive superstructure is modified according to structural exigencies In Gujarati works on architecture, 24 varieties of Śikharas are described built either with a brick core or hollow (Burgess—Cousens, 'Architectural Antiquities of Northern Gujarat', ASWI,

confirmed by its very names, Prāsāda, Sadma, Sadanam, derived from or identical to the word Sādanam itself which denotes the piling of the Vedic altar

It is thus as a Caitya[50] that the exterior of the temple, the Prāsāda, is proportionate in its measurement (vimāna) and the object of being looked at (darsana)

Vol IX p 2) In its upper part the Śikhara is frequently altogether massive The massiveness or the degree of the hollowness of the Śikhara and also of the foundation of the terrace on which stands the temple depend upon various technical solutions Raised platforms built on a cell foundation similar to those at Sirpur, are also below the sixth century temples at Bhitargaon, built of brick, and the stone temples at Deogarh and Nachna Kuthara The stone Śikhara is built generally by corbelling (kadalikā-karana, 'Tantrasamuccaya', I II 47), of courses of cut stone overlapping each other inside, until they meet and close the opening It is covered by the horizontal plate (skandha) which forms the platform on top of its trunk

The stones or bricks filling the upper portion of the Śikhara rest on a horizontal tie-plate It is called 'ratna muda', in Orissa, a lower horizontal tie-plate, the 'garbha muda' forms in some temples the ceiling of the Garbhagrha (Pl facing p 120, in N K Bose, op cit, showing the ruined Rekhā temple at Telkupi, Manbhum, with its inner construction laid open) When however the Śikhara is hollow, the Āmalaka (silā) and Kalasa finial serve to lock the heads of the walls together

The Śikhara of the Lingarāja temple in Bhuvanesvar, Orissa, has at least one internal chamber above the flat roof of the Garbhagṛha It is accessible by a steep staircase built through the thickness of the sides of the Śikhara, above this internal chamber, which has a window, a third similar chamber is said to exist (R D Banerji, 'History of Orissa', Vol II p 360) These internal spaces have no part in the effect or symbolism of the Prāsāda, they are technical devices for lessening the weight of the superstructure, the same purpose serve the great trabeate arches in the sides of the Śikhara and which are closed up by an 'antefix', the Śukanāsā See also Part VI, note 65

The Mahābodhi temple of Bodh gayā, the temples at Konch and Boram (Bihar) (R D Banerji, 'The East Indian School of Mediæval Sculpture', ASI, I S 1933, Pls 83, 85), Parauli, U P (ASIAR, 1929-30, Pl V), etc, have also hollow chambers in the superstructure which differs in plan and section in these buildings If, as in the Mahābodhi temple, the chamber was accessible from outside, it is a residue of a phase of temple building (Lad Khan Temple, Aihole, Pārvatī temple, Nachna Kuthara), where the form of the superstructure had not as yet consolidated

[50] Caitya is derived from Citi A Caitya, in the Buddhist application, with reference to a man-made form, is the Stūpa The meaning of Caitya, in the 'Mahābhārata', where the country is described full of Caityas and Yūpas (sacrificial posts) is sacrificial altar The 'Rāmāyana', II 3 18, II 25 4, II 71 41, speaks of Devāyatana and Caitya Āyatana means a resting place or support and as such a seat, the place of the sacred fire, and also an abode of divinity The definite sense of 'house' seems conveyed by the word Caityagṛha ('Rāmāyanā', V 12 14), it is commented as 'Buddha āyatanam' or, acc to Govindarāja, as a Mandapa of Catuspathas, a hall of Vedic Brāhmanas The Caityaprāsāda again which had 100 pillars and was very high, is commented as a Buddhamandira and in the latter instance, by Govinda rāja, as a building like a Devāyatana ('Ind Antiquary', XI p 20) Coomaraswamy, 'Yakṣas', Pt I pp 17-27, shows that a Caitya and Āyatana is a 'bhavana', a haunt or abode of a Yakṣa This can be an altar or a constructed temple, or also a sacred tree, or a tree with an altar

Medhātithi on 'Manu', IV 39, refers to a structural building, of the type, may be, of the little domed temples as shown in the reliefs of Barhut, etc

Caitya, Āyatana, Prāsāda, etc, etymologically and originally are piled up seats or altars, sanctuaries in the open and also within an enclosed space

In certain buildings the massively piled socle of the temple rests on a pedestal or sub socle (upapītha) of considerable height and the walls of the temple are set on a double sub-structure, the socle projects from the Mānasūtra and gives a broad basis to the building

Hence brick, Istakā, has remained the principal building substance of the temples, for the wooden log or the stone beam is considered and treated as Istakā It is put to the same use, for the same purpose, as the brick (istakā), which is derived from the radical 'yaj', to sacrifice or to offer and is the original sacrificial substance (Part IV) In this connection it becomes clear why the true arch has not been employed in the Prāsāda, nor even in the halls, Mandapa, accessory to it [51] The method of corbelling (kadalikā-karana) and the trabeate arch are adjustments of the process of piling, necessitated first of all by the internal chamber, the Garbhagrha in the body of the Prāsāda and also by the larger halls, added to the Prāsāda

The several mouldings of the socle (adhiṣṭhāna) project each in proportion to its own height beyond the Mānasūtra, (the side of the wall of the Prāsāda, externally) Jagatī and Kumuda have each a projection equal to their own height, while other profiles, such as Paṭṭikā, Padma, etc may project each as much as their own height, or ¾, ½, or ¼ of it only This is left to the discretion of the architect ('Tantrasamuccaya', I II 16) Jagatī, in this context, is a projection of the socle, and not the whole terrace on which the temple may be set up (see note 44) Jagatī as a part of the Adhiṣṭhāna is also dealt with in the 'Vaikhānasāgama', ch VI

In no type of the temple however is the 'citi' as substantially part of the entire conception as in the terrace-temples, excavated in Pahārpur in Bengal (c 8th century, 'Memoir, ASI, No 55, p 7 f), and Ahicchatra, near Rampur, Bareilly, in the United Provinces, dating from the fourth to the tenth and eleventh century (note 117) In these large and spreading brick structures the super imposed terraces, of which there are three or more, recede successively forming a stepped pyramid from whose centre arose the walls of the shrine

[51] The true or radiating arch built of voussoirs has been employed, although on a restricted scale in various brick buildings only, hitherto excavated , in Bhitargaon, Nalanda (Monastery, IX No 10), Mirpur Khas Brahmanabad, the Mahābodhi temple in Bodh gayā, etc in porches, vaults of passages, monastic halls, etc , cf Coomaraswamy, HIIA, p 73, n 4

## 2 THE DOLMEN

The ground plan of the Garbhagṛha is, as a rule, square, in conformity with the plan, the Vāstumaṇḍala and its division into squares.[a] The Vedic altar does not account for the square chamber within the Prāsāda. [illegible] are long and in principle also as high as they are broad (see Chart, Part VII). A cube forms the sanctuary of certain temples of the Gupta Age, they are located mainly in Central India.[b] Their roof is flat, it does not carry a superstructure. Other types of low roofed temples too, of about the same age though different in plan are well known from Western India,[c] besides, flat roofed temples of the early

[a] As an elaboration of the square, the outer face of the walls [illegible], shows two varieties of buttress formation. In one case the [illegible] wall at regular intervals and produce a fretted outline and in the other, the [illegible] wall proliferates in one or more further projections [illegible] plan. These types are also frequently found in combination.

The rectangular Garbhagṛha is an application of the [illegible] for instance more than one image is the cult object, in temples of the [illegible] is the now so-called Varāha temple at Kadvar (Cousens, 'Somanatha and other Mediaeval Temples in Kathiawad', ASI, I S, vol XLV [illegible] p 65), or in those of the Mothers (Kapālini D[illegible] Temple or Vaital Deul, [illegible] Navadevi shrine, Jageśvar, Almora, ASIAP [illegible] pl IV). Other [illegible] are those of the Temples at Eran (ASI, vol X p 69), [illegible] (Percy Brown, 'Indian Architecture', p 152) the [illegible] (Cunningham, ASI vol VII pl 8) [illegible] it means 'with long sides', in the sense of having two parallel [illegible] the others, this is a modification of the square plan [illegible] plan, is a modification of the circular or Vṛtta plan (Part VIII).

The round Garbhagṛha is the general [illegible] Śiva temples, at Malabar. Coomaraswamy [illegible] op cit Pt II [illegible] central shrines of all Śiva temples are square in shape.

[b] The term cube is used here to designate [illegible] of a cube. The Buddhist Temple No 17, Sāñcī, Viṣṇu Temple [illegible] (Percy Brown, op cit, Pl XXXIV). Kankālī Devī Temple at Tigawa, C P [illegible] Devī near Unchahara, C P (Cunningham, ASI, vol IX p 31) [illegible] to the 10th or 11th century judging from the carvings of its door frame [illegible] Gonds, in the Lalitpur District, c I (P C Mukherji, 'Report on [illegible] the District of Lalitpur') are the corresponding aboriginal types. [illegible] still set up miniature dolmens. Dolmens are also set up to the [illegible] Oraon, Bhil, Kurumba and Malayarayan. [illegible] Kunjan Pillai 'The Travancore Census Report', pp 57-60 "Dolmens have actually been used as Śaivite temples", Census of India Report, 1931, p 406. Old dolmens are set up as Śiva shrines, for example at [illegible], Anantapur District, see Longhurst, 'Annual Report of the Archaeological Survey of India', Southern Circle, 1915 16, p 20, Pl III.

The square of the Garbhagṛha at Tigawa measures 8', outside the length of the walls is 12½'. Re the pillared porch, the shape of the architrave and other stylistic features of the flat roofed Gupta temple, see P Brown, op cit, p 55.

[c] The Lad Khan Temple and Durga Temple, at Aihole etc. These temples have not an altogether flat roof of one stone slab only nor of beams placed horizontally on the architrave or wall. P Brown, op cit, p 61, Pls XXXVI—XXXVIII, describes their particular roof

and later Cola period, in South India, though younger
A D and even later, are equally significant [55] All thes
well cut stones, dressed to level beds and placed one
mortar or cementing substance Contrary to curren
Gupta Age in Central India, and in Western India, l
roughly half a millennium,—the flat or low roofed te
To this day, moreover, small flat roofed shrines abou
South India The prototype of these shrines is the do
slab of stone, supported by three upright slabs set on
chamber with one side open to serve as an entrance [56]
shrine of Pattaini Devī at Unchahara whose doorway
cannot be earlier than the tenth century and whose ar
type', has a flat roof which is just one slab of stone [57]

Various phases of stone temples of the dolmen ty
India, some of roughly hewn stones and with a stone I
of carefully dressed slabs of stone accurately fitted at
resting upon a plinth, about one foot high and not pla

construction Stone slabs with grooves and corresponding rid
covered by long, narrow stones fitted into the grooves, it is a
sloped, in one or two tiers above which is placed a straight r
of the building

The pillared plan of these hall-temples, is square in the
cf note 100) in the other case, far removed from, or not connec
type

The flat roofed brick or stone temples, described in
ch XLIX, and partly also in ch LII appear to have been si
temple

[55] They are Śiva temples at Tiruvalangudi, Mangudi, N
Pudukottai state JISOA vol V See also the large stones
Vimānas having high superstructures, at Kodumbalur, ib Pl V

[56] Cf note 53

*In the Dharwar District, Bijapur, dolmens, not likely to ha*
were set up on a hill at Aihole, near the temple of Meguti
consisting of three great slabs set up on edge, forming three
larger flat slab to form a roof, was used as a shrine for wors
Bādāmī and Mahā-kūtesvar, are to be found hundreds of mini
put up by the women pilgrims to the latter shrine to register t
of a few flat stones, and, as they fall apart, their stones are us
H Cousens, 'The Chālukyan Architecture', ASI, NIS, vol XI

To derive the flat roofed structural temple from precedi
types as is generally done, is hardly possible The rock cut
Being a work of sculpture by excavation, any shape can be cut
vaulted type of bamboo origin and the other, the 'dolmen typ

When the flat roofed, square shrines were set up, others v
sometimes the two techniques result in one shrine as in the so-
of about or before 400 A D (ASI vol X p 41)

[57] *It measures 7′ 8″ × 7′ 4″* (Cunningham, ASI Rep IX
the other temples are made of rectangular stone slabs, put toget
grooves (Tigawa)

persed occurrence of the flat roofed temple testifies to simplicities which are perennial in Indian art, which have remained practically unchanged

The flat roofed temple has the dolmen for its prototype Like the menhir it marks (cf the Linga, which means distinctive sign) a sacred site Neither dolmen nor menhir are necessarily memorials to the dead, they commemorate the importance of the site which is marked by them "Kynmaw" which means "to mark with a stone" is the word used by the Khasis in Assam, in connection with monoliths, table stones and cromlechs [61] There, in the dolmen, a suprasensible presence is confined and enshrined [62] The marking of a site (ksetra) shows that it is dedicated to a higher presence This is a general practice in India, where every orthodox Hindu, every day marks his body (ksetra) with the symbol of the deity on his forehead The stone dolmen and menhir, and the stone shrine and Linga, are cognate

It is seen from the 'Visnudharmottara' and other texts that the science of selecting and testing the stone is most developed where the stone has to be chosen for a Linga Stone indeed is the aboriginal substance of the Linga Gold and brick are the sacrificial substances of the Vedic altar Gold, the purest of all substances is not considered in this respect, loses its value and is only given second consideration when a Linga is to be made The 'Lingapurāna' (ch XLVII 5) speaks of a Linga made of gold and jewels, or of silver or copper, as alternatives

at Perumpalutar, 9th century, 'Archaeol Dept Administration Report', 1111 M E p 2) The circular stone walls which the Todas, in the Nilgiris, South India, set up around their Boath and also the Pev temples, Tinnevelly Dist, S India (G Oppert, 'The Original Inhabitants of India', p 573), must not be overlooked

The circular Prāsāda and Garbhagrha as well as those which are square have their roots in the past of India, in Vedic rites and in aboriginal use in the country

The 'Śatapatha Brāhmana', XIII 8 1 5 distinguishes between the four cornered (daiva) and the round (āsurya) sepulchral mound, the square being made by those who know the three Vedas and the circular by the easterners and northerners These mounds were lined with stone The rites for the dead have their own place apart from those of sacrifice (yajña) and of worship (pūjā) The Śmaśānacit, the mound for the dead has its definite characteristics ('Āpastamba Śr Sūtra', XXXI 5 72)

Form and function of the Prāsāda do not owe anything to the rites for the dead or else in a transferred sense and to that extent only in which the sowing of the seeds, or the rites of initiation signify and are based on the knowledge of death, of dying to a former, lesser state and the undergoing a new or second birth to a regenerate life, on a higher level Temples of Śiva or Durgā are set up on cremation grounds ('Kathāsaritsāgara') because in these terrific aspects death is shown as overcome and merged in the deathless

[61] P R T Gurdon, 'The Khasis', p 145, stones set up to mark the site of purificatory tanks, oath stones, stones as 'seats' and great flat 'sacrificial' stones, on which Pūjā or worship is performed with the offering of rice, etc, are discussed and their specific names given, op cit, pp 145-153, cf also note 56

To this day small shrines are set up by the herdsmen in the Kumaon hills, Western Himālaya (near Binsar, for instance) as Śiva temples and also by the Malayarayans in Travancore They are put together like a dolmen and house an upright stone, the Linga ("Castes and Tribes of South India", vol IV p 388 389) From the Himālayas to Cape Comorin the Linga within the dolmen shrine constitutes the aboriginal temple to this day Cf note 53

[62] Holding or restraining the presence of the invoked divinity is one of the rites of Hindu worship It is accompanied by the Sannirodhinī mudrā ('Īśānaśivagurudevapaddhati', III ch XXVII 104) This purpose, in addition to the marking of the sacred site, is common to the Hindu temple and to the dolmen

only for the Linga made of stone, and which is the embodiment of Brahmā, Viṣṇu and Śiva Stone, as menhir is specially connected with the Linga, and also with the Ādhāraśilā It marks the Omphalos in the one instance as much as in the other It distinguishes as the Centre the place where it stands, around it, the site is sacred [63] Thus it is enclosed by square walls and covered with a roof, for as the 'Agni Purāṇa' says "in the square (catvara) Śiva is present"

The memory of the building stones of the temple is retentive The stones of the walled-in quadrangles which the Gupta shrines are in principle, and also the Cola temples with their added halls, are disproportionately large to the size of the temples [64] They form a near substitute of the monolithic walls of the dolmen

Raised from the earth where it has stood in accordance with the megalithic practice, the flat roofed stone temple on its plinth and terrace, is an established type The 'Samarāṅgaṇasūtradhāra' has much to say about temples without Śikharas[65] which were one-storeyed, flat roofed structures As a rule, however, Vāstuśāstra is preoccupied with the varieties and proportionate measures of Prāsādas having superstructures, and whose height is twice or thrice the width of their walls (Part VII)

The temple with its high superstructure is the ultimate and generally accepted form Śikhara, of which the meaning is 'mountain peak' designates particularly the superstructure of the North Indian Prāsāda [66] The flat roofed temples are contemporary for centuries with temples having Śikharas [67] They are at the same

[63] The coalescence of such places with others, fully recognised by tradition, is spoken of in passages such as 'Brahmavaivarta Purāṇa', I 6 47 48, "a place where the Śivaliṅga is worshipped, though it is a place not fit for pilgrimage, shall be turned into a place of pilgrimage"

[64] Three courses of stones are equal in height to the shafts of the wall pillars, in the Cola temples (note 55) —The Maṇḍapam preserved at Mukundwara, Kotah, in Malwa, about the fifth century A D is set up of most carefully dressed sand stone blocks of cyclopean size

[65] In ch XLIX, the 'Samarāṅgaṇasūtradhāra' exclusively treats of stone or brick built Prāsādas without Śikharas They are covered by a Chādya or a double and triple roof Chād, even to day in Bengal denotes the flat roof of a brick structure These Prāsādas were not dolmen temples, their interiors were rich in pillars (see Part VII)

[66] N V Mallayya, op cit, JAU, vol X p 181, stresses the meaning 'head' which Śikhara has, derived from Śikhā, the tuft of hair worn by an orthodox Hindu on the crown of the head Synonyms are Śiras and Śirṣa, both denoting head This microcosmic reference to the head is no less valid than the macrocosmic one to the Mountain, to Meru, the pole of the world The full meaning of the Hindu temple is given form by the Prāsāda with its high superstructure, in this sense Śikhara is to be understood and not as a roof which also may be flat (as assumed by Mallayya, JISOA, vol IX p 83, in an article on 'Nagara, Drāviḍa and Vesara'), see Part VII where the different connotation of Śikhara in the Northern and Southern tradition (śāstra) is explained

[67] The flat roofed temples are (1) of the dolmen type, and (2) of the pillared hall type, about the latter the 'Samarāṅgaṇasūtradhāra', in chs XLIX and LII, gives ample information (see note 65 and Part VII)

Amongst the earliest preserved temples having a superstructure are the stone temple in Deogarh, with an apparently curvilinear Śikhara, one of the four curved sides of a Śikhara, carved in one piece of red stone of Mathurā and belonging to the Gupta age, is in the Curzon Museum, Muttra The curvilinear surface is divided into three vertical zones, the broad field in the middle is covered with a Gavākṣa pattern, the lateral portions are complete with Bhūmis, each consisting of 2 courses and terminated by a large Āmalaka The temple in Deogarh and

time embodied within the Prāsāda and below its Śikhara, in some of the temples of South India, the flat roofed temple with its cubical chamber is repeated vertically within its superstructure [68]

the brick temple of Bhitargaon are of the sixth century, the stone temple of Gop, Kathiawar (5th—6th century) has a pyramidal superstructure and, in certain respects similar to it, is the four storeyed pyramidal superstructure of the temple at Visavada, though somewhat later (H Cousens, 'Somanātha and Other Temples, etc' ASI vol XLV, Pls XLIII-XLIV, pp 44-45) A carving on a lintel of the Gupta Age, at Sārnāth shows relief representations of related superstructure, (Coomaraswamy, 'Early Indian Architecture', 'Eastern Art', III Fig 59) The superstructure here is of the rectilinear type, consisting of superposed roof cornice mouldings It is crowned by a very broad Āmalaka on which rested the finial (Fig c, in Part VI) The stone built temple of Mahākūṭeśvara, near Bādamī, erected in the third part of the 6th century is discussed in Part VI

Fifth century inscriptions speak of high Śikharas, ('Corpus Inscriptionum Indicarum', vol III No XVII, verse 21, No XVIII, 12, 30)

What precisely Śikhara and Śṛnga of the Prāsāda or the Vimāna meant in the Epics except the top of a high building cannot be reconstructed from the respective passages, which compare them to clouds and mountain peaks ('Rām' II 17 17, II 33 3, etc, see Acharya, 'Dictionary', op cit, s v) The Śunga relief representations show vaulted and dome shaped roofs of bamboo construction

Two relief representations from Mathurā of the Kuṣāna age show superstructures whose constituent parts and outline differ from later types and prescriptions (Coomaraswamy, 'History of Indian and Indonesian Art', Figs 69, 69A)

The earliest preserved temples which are not one storeyed and flat roofed, are variously given additional height Two main types can be distinguished, the one has a second smaller flat roofed temple above the Garbhagṛha of the ground floor (Pārvatī temple at Nachna Kuthara, C I and the Lad Khan temple at Aihole), and the other, described at the beginning of this note, has a more or less pyramidal, etc superstructure, articulate with horizontal bands, mouldings or storeys Some were rectilinear such as the temples of Bodh-gayā, Bihar (at the time of Hiuen Tsiang), and the temple at Gop, Kathiawar, others like the Daśāvatāra temple at Deogarh and the brick temple at Bhitargaon with their recessed courses appear to have yielded a curvilinear rather than a straight outline To these may be added the Mahādeva temple at Nachna Kuthara (Progress Report, ASI, Western Circle, 1919) and the temple at Pathari (ASI vol X p 75), see also S K Saraswati, 'Temple Architecture in the Gupta Age', JISOA, vol VIII p 146) Re Vaulted temples, see note 41 The temples are either 'sāndhāra' or 'nirandhāra' with or without a covered circumambulatory

[68] The Vaikuṇṭha Perumal temple for example, at Kāñcīpuram (Conjeeveram, near Madras), of the second decade of the eighth century, cf sectional drawing, Pl LIV, P Brown, op cit, Fergusson, HIEA, vol I Fig 210

## 3 The Shed of Initiation and the Tabernacle

The dolmen shape raised on a socle or base (adhisthāna) can be recognised in the flat roofed temple It remains, however, the nucleus, the sanctuary, of the temples with high superstructures whose walls are rich in buttresses and manifold sculptured images They always enclose its small cubical inner space, unbroken by any opening, except the entrance [69]

While the primeval shape of the dolmen is, architecturally, the prototype of the sanctuary enshrined in the Hindu temple, other closed types of sacred buildings also have preceded the Hindu temple They too, have lent their meaning and added their shape to the cube of the Garbhagrha They are the Vedic shed of initiation and the undatable 'Tabernacle' made of bamboo, or branches or of large palm leaves only, in which a divine presence is known to dwell while being worshipped

Neither of these structures has contributed its particular form to the sanctuary itself The shed furnished additional ritual secrecy to the interior of the Hindu temple, the Tabernacle of the forest, similar to the dolmen in this respect, was raised on a socle or altar and while it enclosed the sacred space it marked it by the high shape of four curved branches fixed in the corners of a square and with their ends gathered to a point Such a conjoining of various shapes and resources to form the Hindu temple is seen not only in its beginning but also in the different phases of its history and in its types (Parts VI and VII) It would result in a compilation, and in the literal sense of the word this is indeed the case, were it not that the congregation of all the available possibilities is to one point only, to the gradual and measured reduction of all the wealth of three dimensional form in one direction, that of ascent, towards a point which is that of the final above the high superstructure In this surge of measured units imbued with meaning, the metaphysical aim is supported by principles of vegetation, by growth and ramification, by symmetries and proliferation of form

The architectural rite of depositing the seed of the temple is continued in the 'natural' discipline of its form which the architect (Sthapati, Kartr) masters by his aptitude, training and skill An integration of his personality, that of the patron the Kāraka, and of the shapes of many origins is effected by his work and is visible in its form Such one-pointedness (ekāgratā) is the motive of the Hindu temple with its high superstructure, ostensibly it leads to the one point which is even beyond its own shape This one-pointedness resulted in the predominance of the temples with the four sided, pyramidal, or curvilinear superstructure over the other temple types, with flat or keel and barrel shaped roofs, etc (Part VI)

The various Vedic hearths were in the open or in sacrificial sheds [70] One of these sheds, the Sadas, in which are seated (sad) the sacrificer, his wife and the

[69] Temples having entrances at the cardinal points are however described in Vāstu Śāstra and a few have been preserved (see Part V, note 73)

[70] The Prācīna Vamsa-śālā (see p 23) is outside, to the west of the Mahāvedi Sāyanācārya speaks of the Prācīnavamsa (śālā) as the womb of the Dīkṣita ('Ait Br' I 3 11-14, comm)

priests, is set up on the Mahāvedi It is covered on all sides with mats and faces the East where is its door [1] That it is enclosed has a meaning akin in its context, though divergent in its purport from that of the houses, at the time when the trees withdrew from this earth (p 116) "That Sadas they enclose on all sides with a view to that generation, thinking Quite secretly shall be carried on that generation, for improper indeed, is the generation which another sees Therefore to any one looking into the Sadas except through the door, let him say 'Look not', for it is as if he were seeing intercourse being carried on Freely (one may look) through the door, for the door is made by the gods" (Ś B IV 6 7 9) It is an act of generation which is performed in the enclosed hut, an initiation which leads to a second birth, in which the initiated is the embryo ('Maitrāyanīya Samhitā', III 6 7) and the hut is the womb ('Taittirīya Samhitā', VI 2 5 5)

The enclosed space is a Garbhagrha, a house which is the womb, this is the name of the innermost sanctuary of the temple [2] The Garbhagrha is the womb of the higher Self It is said "The initiated departs from this place, he goes into foreign land, he ascends to the space of the gods When enclosing (the hut with mats), (door) openings are made, thus he does not (altogether) leave this place, thus he stays in this world" ('Maitr Sam ', III 6 1), for not only to the east but at all the cardinal points, door-openings should be made (Āp Ś S X 5 4) This is no final departure but a return to his spiritual home and origin from where the initiated comes back to the world of man Thus are made "apertures in the four directions for the winning of both the worlds" ('Taitt Sam ', VI 1 1 1) Within the hut which faces the East, the sacrificer, the embryo within the womb, also faces the East where the gods live, facing them he beholds them, he is one with them "The hut is enclosed (on all sides by mats) for the world of the gods is divided from the world of man" (Āp Ś S X 5 1)

The secluded interior of the Sadas on the Mahāvedi is a precursor of the Garbhagrha in the Prāsāda on its raised terrace or base, with its main door in the east, and the other, vestigial ones as niches or 'massive doors' (ghanadvāra) at the remaining cardinal points [3]

[1] Ś B III 1 2 2 (Kāty VII 1 25), III 6 1 2 The Sadas is rectangular and may be a double square Its long side faces the East Its measures are 18 or 21, 24, 27 cubits and its breadth is one-third (6 cubits), less than one-half, or half of the long side In the middle of it is the post of Udumbara wood It has the height of the sacrificer (SBE vol XXVI p 141) The proportion of its plan 1 2 or 1 3 recurs in the height of the exterior of the Hindu temple Here, however, it is the interior which matters most and this has the height of the sacrificer

[2] Vedic initiation is performed to-day in the centre of the house, either in a room in the interior of the building or in a specially erected 'pandal' or Mandapam in the centre of the courtyard within the building The secluded place in the house or in the Mandapam, set aside for the initiation, is called Garbhagrha

Garbhagrha, in domestic architecture, designates the interior part of the house ('Samarāngana-sūtradhāra', ch XIX, 27)

[3] The temples which are preserved, generally have only one door to the Garbhagrha, the place of the others is taken by 'ghana dvāras' or massive doors, as they are called ('Tantrasamuccaya', I II 20 comm ) These are niches in the walls of the Prāsāda, the walls of the Garbhagrha, in the interior, as a rule, are plain

The going from here into another world, that of the gods, is an ascent—and also a descent and a return to the beginning, the Mūla-Prakṛti, the root-evolvent, the dark, non manifest power, receptacle of all there is to be. In this female identity, the Garbhagṛha is the womb, the house of the embryo, of the 'avyaktam' that which is not manifested or not yet manifest.

The Vedic shed of initiation, by its scope and also as far as it is constructed on the Mahāvedi precedes, the Garbhagṛha of the Hindu temple. Built of wood and mats, it had a pent roof with a ridge, it was without a superstructure.[74]

While the shed of initiation contributed the significance though not the shape of its secluded interior to the meaning of the Garbhagṛha, the Tabernacle of bamboos, banana leaves, coconut palm leaves or of bended branches in its primeval form is set up to-day even and encloses a small space where the articles of worship are placed on the seat of the imageless divinity, Satya Nārāyana. The elongated

Extant Prāsādas with four doors are a Temple at Sinnar, the temple of Siddhanātha, at Mandhata, on the Narmadā, and another in the village at Unkal, Dharwar, cf. Jain temples, see Part VII.

Prāsādas with 2 doors, the one opposite to the main entrance are also in the Deccan, the Siddhesvar Temple near Akola (Ahmednagar), another one at Ratanvadi (H. Cousens, 'Mediaeval Temples of the Dakhan', op. cit. p. 53).

In Hindu cave temples of the Deccan, dating from the 7th century onwards, the Garbhagṛha in the Dumar Lena at Elura, in the Śiva temple at Elephanta and in the Yogesvarī cave on Salsette, has four entrances, the surrounding Maṇḍapa can be entered from three sides. The Garbhagṛha of Mahādeva's temple of Karusi has three, and that of the Dhokesvara cave temple, two entrances (Fergusson Burgess, 'Cave Temples of India', Burgess 'Report on the Antiquities in the Bidar and Aurangabad Districts', Pl. XIV).

The rites of entry, purification and worship in the 'pūjāgeha', the house of worship, are described in the 'Īśānaśivagurudevapaddhati', III ch. XII. 24-100, (transl. St. Kramrisch, JISOA, X pp. 240-250).

[74] Gabled or pent roofs over rectangular temples and their equivalent, i.e., conical roofs, single or double over circular temples are the rule in the indigenous wood-stone temples of Malabar, ancient and contemporary. Repeated in tiers, compressed in height, and translated into stone, the pent roof is the unit of the pyramidal superstructure of the Maṇḍapas only, of Orissan temples, and of the Prāsāda itself at Gop, in Kathiawar, cf. gabled temples in Kashmir and Nepal, cf. P. Brown, op. cit. Pl. CII pp. 155-157.

The temple at Gop ends with a crowning shape above a two-storeyed pyramid and horizontal courses of originally overlapping wooden planks, from this background project the Gavākṣas or Candraśālās.

[75] The designation 'Tabernacle' is used here as an equivalent to house of god ('devāgāra', or 'dev-ghar') which is the name given to this primeval form of the temple by the people who set it up to-day even. The 'dev-ghar' of banana leaves the writer saw being set up and used in the worship of Satya Nārāyana, performed by Malis, gardeners, near Gayā, Bihar.

Its shape when translated into brick or stone facilitates a unification of the perpendicular walls of the Garbhagṛha and the superstructure, which is curvilinear. A more or less stilted arch results in the vertical section and the possibilities of its curvature are many (see Part VI).

The survival of the tabernacle of leaves in the worship of Satya Nārāyana, a cult of recent origin, and in other, ancient forms of Pūjā connected with the performances of vows (vrata) is an equivalent, in the sphere of architecture, to certain survivals in the sphere of images. Durgā, the Great Goddess, is worshipped in Bengal by means of an elaborated earthen image of her 10-armed form together with the figures of her attendant divinities. Added to this image is a young banana plant wrapt in red cloth, the Kalabau or Navapatrikā. This is the plant symbol of the Great Goddess.

curves of such a structure converge to a point and close their lines to form a house of God They are the prototype of the temple having a curvilinear Śikhara and were to rise above the Garbhagrha as its superstructure Four bamboos, etc , or branches fixed at the corners of a square, their stems bended and tied horizontally by withes or strings at regular intervals is its pristine shape

The Tabernacle consists in all directions of the Arch of Vegetation The Arch by itself was also set up, made of two branches of Palāsa or Śamī trees ('Āpastamba Śrauta Sūtra', Part IV) No written record describes the primeval and impermanent houses of God, the spirits and powers

Another kind of temporary 'house' is set up in Bengal during the spring festival Holi It is constructed of seven or eight dry, bent bamboos, the ends of each being planted in the ground produce a beehive shape [76]

Neither the shape of the Tabernacle of leaves, etc nor that of the 'beehive house' are identical to that of the temple having a curvilinear Śikhara, for the latter is always truncated, its point is divided from its body which terminates with a platform or shoulder-course (skandha), from its centre rises the neck (grīvā, kantha) on which rests the Āmalaka Above this is placed the finial of the temple, it leads to the Highest Point

The central Pillar, the axis of the temple, where it exceeds the bulk of the Prāsāda was given shape in the brick and stone built temples above its curvilinear superstructure, it is its neck (grīvā) The neck, the Āmalaka (Pt VIII) and *the finial (stūpi) are the shapes and symbols of the vertical axis of the temple where* it emerges into visibility (Pls I, XLV)

The Tabernacle was put on top of the flat roofed Prāsāda, or alternatively, the upright, lower part of the Tabernacle was assimilated into the walls of the Garbhagrha The meaning of this prototypal shape is not given in scripture, it is shown in the curvilinear shape of the high superstructure of the majority of mediæval Hindu temples built in brick or stone, its form remains nearer to its origin, when, built of bamboo or wood it is carried on the wheels of the temple chariots The temple chariot is neither a copy of the temple nor is it its model The temple is the stationary (sthira) form, the chariot is the movable (cala) form of the seat and house of god, the Tabernacle The same distinction applies to the image, it is either immovable, the Dhruvabera, permanently fixed in the Garbhagrha, or it is movable (cala) and carried about in procession Both these varieties of the Tabernacle and the image express the two-fold nature of divinity, who as Pure Principle, Śiva, is immovable and has an immovable seat (acalāsana), and as Śakti, Energy, is movement itself and is therefore enthroned on a movable

[76] It houses an effigy made of rice paste of the Old Woman, which is worshipped by the priest Then the house of the Old Woman (budīrghar) and the effigy are burnt to ashes which are magically effective

I am indebted for this information to Sudhir R Das

A peculiar brick (?) structure of elongated beehive outline and with a Gavākṣa, carved on its lower part, is represented in a relief from Amarāvatī (First Period) , cf C Sivaramamurti, 'Amarāvatī Sculptures in the Madras Museum', Pl XVI The Gavākṣa is surmounted by a very tall finial of several components (Āmalaka (?), etc )

seat (calāsana) [77] This two-fold aspect of divinity has its corresponding rites, images and architectural forms such as the Prāsāda, its seat, and the chariot (yāna), its vehicle

'Īśānaśivagurudevapaddhati', III, ch XXVI 73 f
T A Gopinatha Rao, 'Elements of Hindu Iconography', vol I Introduction, p 17
There are also 'calācala' images, which as a rule immovable, may yet be taken in procession in certain rites
Chariots of Jagannātha are drawn in procession during the car festival, Ratha Yātrā, annually, in Bengal they are constructed of bended branches, etc and resemble the 'dev-ghar' (note 75)

# THE IMAGE OF "THE MOUNTAIN AND THE CAVERN"

## (A) THE GARBHAGRHA

Meru, Mandara and Kailāsa are the first three names amongst the twenty types of temples described in the early texts, the 'Brhat Samhitā' and the 'Matsya Purāna', all three are the names of the Mountain, which is the axis of the world, that is Meru, the pole of this earth, Mandara as churning rod, planted on Visnu, the tortoise, during the Satya Yuga, the first world age after the great commotion, and Kailāsa, as seat of Śiva, in the Himālaya In these names rises the temple, the image, aim and destination of this world edifice [78]

To serve this image, various architectural forms such as the curvilinear Tabernacle having paraboloid lateral surfaces, the pyramid, dome and roof shapes, are employed Their possibilities are exploited and yield a monumental unit Their forms are developed logically, they are, moreover combined and indefinitely varied

There is no equivalent term in Western architecture to fit the high shape of the Hindu temple, its superstructure This superstructure has the height of a spire, and fulfils the function of a roof Its verticality is unobstructed by any horizontal roof line If halls (mandapa) are added to the Prāsāda, their high roofs ascend in relatively lower peaks, graded in height and isolated the one from the

[78] Br S LV 17 f, 'Matsyapurāna', CCLXIX, 28 f Inscriptions extol eloquently and unceasingly, the temple as the Mountain The Mandasor inscription of the temple of Sūrya built in 437—438 A D describes it with its broad and lofty spires resembling a mountain, 'Corpus Inscriptionum Indicarum', III p 83 This temple was repaired in 473-74 A D and then described as temple of Sūrya, which touches the sky, as it were with its beautiful Śikharas ('Indian Antiquary', XV p 196) The Gangādhara stone inscription of Visvavarman in Jhalawar, Mālva, speaks of a temple of Visnu (Visnu-sthāna) resembling the lofty peak of Kailāsa ('Corp Insc Ind', III p 44) which is Śiva's mountain, but is referred to as representing the World Mountain The Hansot Plates of Cahamāna Bhartrivaddha (Broach 756 A D, 'Ep Ind', vol XII p 203) designate Meru as Jayādhāra, support of Jaya, the Sun (see Part VIII ch 'Āmalaka') According to the 'Prabandhacintāmani', King Karna of Gujerat constructed the Karnameru-prāsāda in Anhilwad, the name of the king being linked with the temple type Meru Meru is the 'king of Prāsādas' ('Samarāngana-sūtradhāra', LV 3)

In Vijayasena's inscription at Deopārā ('Ep Ind' I pp 310, 314, P Mus, op cit, p 413, Inscr of Bengal, vol III), the high temple of Pradyumnesvara is compared to the (central) Mountain on which rests the sun at midday, and this is the only Mountain worth mention among all the mountains

The temple as the Mountain is not only so described in the inscriptions, etc The Pārvatī temple at Nachna Kuthara (ASI vol XXI p 95) has the outer faces of its walls covered with carved rock shapes—a none too satisfactory experiment in form The final shape of all these 'mountain peaks' is the Śikhara-cluster (Part VI) —In the geography of the Purānas, Mandara is the mountain east of Meru ('Visnu-P' II ch II 17), it can be imagined as its eastern Ūrusrnga Kailāsa, the abode of Śiva or of Kuvera, is situated to the north of Mt Meru, or it is said to be one of its three peaks ('Siddhānta-śiromani', II III 36), so that either of these peaks, Mandara and Kailāsa, is a part of Meru

next [79] The steep ascent of the superstructure from the walls of the Prāsāda then appears integrated in a slower approach, along a sky line rising with triangular indentations, towards the main Śikhara (Pl I) The towering superstructure, the Śikhara, moreover forms one monumental unit with the perpendicular walls which support it and from where it rises to the high point of its finial A series of mouldings and recesses of the pedestal and socle (upapītha and adhisthāna) of the Prāsāda lead in stepped and curved, slanting profiles to its wall rich in corresponding mouldings (vedikā or 'pābhāga' and the crowning mouldings) whence spring the ascending curves (rekhā) of the Śikhara (Pl XLIII), the complete Prāsāda has the form of an unbroken ascent from the base to the finial [80] Within it and below the superstructure[81] is the Garbhagrha, the 'womb of the house' a small chamber, square, in the majority of preserved temples, and dark as a cave in a mountain It is the innermost sanctuary of the Vimāna, and the entire temple

In its interior it has four plain walls They are massive annd their continuity is broken only by the entrance in the front wall [82] There is no other source of light If the door is closed, the interior is dark In the larger temples, where one or several halls precede the sanctuary, the image is but faintly lit by the light of day as it reaches it across the hall, a dim light just sufficient to set off the image against the darkness of its chamber, the darkness deepens towards the corners even though oil lamps may illumine the image during ritual worship (pūjā) Darkness too, descends on the image from the top of the cell, in the belly of the tower The limits of the Garbhagrha, the sanctuary, are more felt than seen, though even in the largest temples it remains in actual dimensions a chamber of small size, here surrounded as it is by two sets of walls and with spacious halls leading towards it[83] it appears proportionately smaller than in temples of lesser dimensions

[79] This refers to the majority of Indian temples with their curvilinear Śikhara The Mandapa should not exceed in height the Śukanāsā of the Śikhara of the Prāsāda The Śukanāsā, at different stages of the evolution of the Śikhara, reaches up to half of its height or less than that (Part VII, note 35)

[80] This is not so in South India There, the cube or the four sided prism of the walls, and the pyramid of the Bhūmis or storeys forming the superstructure are sharp in their distinctiveness and retain the outline of a drawing of the Tetraktys, an analogous form, pyramid on cube, is the rule in the structure of the Mandapa in Orissa In its vertical section moreover it does not coalesce with the Prāsāda into one comprehensive unit, but retains its integrity as a counterplay in the design of the whole This is expressed by local tradition which considers the shape of the Mandapa as female and that of the Prāsāda as male, while the 'Bhuvanapradīpa', XLII, I c, speaks only of the 'gaṇṭhiāla', the 'marriage knot', between Prāsāda and Mandapa

[81] In some South Indian temples, the first Garbhagrha is on the ground floor, and a second, third and fourth Garbhagrha on each successive floor of the pyramidal superstructure (note 68) In earlier temples such as the Pārvatī Temple at Nachna Kuthara, C I, ('ASI Western Circle, Progress Report', 1919, pls XV, XVIa) of Gupta age, a 'replica' of the flat roofed, one storeyed temple is placed on its roof The two Garbhagrhas, one above the other stand up in the shape of a high four sided tower, its upper half in which is the higher Garbhagrha emerges above the walls and roof of its ambulatory (andhakārikā) cf also the temple at Gop, the shape of the inner walls

[82] See however note 73

[83] The length of the Garbhagrha is about 12' , the length of the total building with its Mandapas is 102' 3", in the Kandarīya Temple in Khajuraho, (B L Dhama, 'A Guide

The square of the ground plan, the interior of the sanctuary, the small cubicle filled with darkness extended into the mass of the Prāsāda, and its towering superstructure, or the Śikhara, which rises from the beam or architrave (uttara) of its walls, these are the surroundings of image or symbol This is the place towards which the devotee proceeds where worship is offered This nucleus remains, poor, undisguised yet hidden, the place where dwells the Supreme Principle, as God, Īśvara, in the consecrated image or symbol

It is independent of time and place, a cavity held by primary elements of architecture and their relationship With them an adequate space is enclosed for the purpose of ultimate realisation This secluded spot is called Garbhagrha The name refers also to the human body and to the inception of life By its name and form the Garbhagrha is a place of primary significance, it does not date, is as old as the Hindu temple, and constitutes its essential part as much today as ever it did The name of the Garbhagrha is not, however, intrinsically connected with its form Both are symbols and each stands for an aspect of the same reality The name and form of the Garbhagrha do not coincide on the plane of things seen They coincide in their destination The Garbhagrha is not only the house of the Germ or embryo of the Temple as Puruṣa, it refers to man who comes to the Centre and attains his new birth in its darkness The Garbhagrha is Rahasya, secret and mysterious (Cidambaram)

The form of the Garbhagrha is based on a square and this makes permissible the use of the designation temple The Romans called 'templum' a square fenced off for augury Within such a preserve the outside influences are excluded The cubical chamber of the Garbhagrha is replete with static order It stands firm This must be so in a sanctuary, a place for the realisation of the Supreme Principle which is infinite and beyond all limits The world in which we live is indefinite in extent and open on all sides to question and uncertainty, within limits, number and measure is the Garbhagrha Like the city of Brahman (Brahmapura) it rests within its four walls ('Maitrāyanī Upaniṣad', VI 28, 38) Their thickness shuts off the outer world and keeps secret the interior Its sacredness is protected from the evil influence of external distractions and from the destructive agents of time and accidents The greatest possible lastingness is secured for the secluded place in which dwells the eternal present during Pūjā

Garbha which signifies the womb as well as the embryo in the microcosmic sense, denotes Prakrti, primordial Substance, in its macrocosmic application The name of the innermost sanctuary does not primarily designate it as the house of God, it refers to a state or degree of manifestation The manifested world, ontologically exists by increasing condensation ether, air, fire, water and earth, the subsequent element always retaining the qualities of the preceding ones Four elements air, fire, water and earth can be touched, seen, tasted and smelt, they proceed in ever increasing density from the first element, ether (ākāśa) It is perceived by hearing Sound (sabda) is the quality of ether (ākāśa), the first and foremost of the elements in the process of manifestation In the beginning was the Word

to Khajuraho', p 9, see Fig in Part VI), as a rule, the width of the Garbhagrha is half of the width of the Prāsāda, but here, the exceptions are many (see Part VII)

Similarly also within the Garbhagṛha is the image or symbol of wood or stone or crystal or it may itself consist of ether, as the Ākāśa-liṅga in Cidambaram. For in the inner ether, (ākāśa), circumscribed by the city of Brahman (Brahmapura) is contained all that is. "In this city of Brahman is a small lotus, a dwelling in which is a small cavity occupied by ether (ākāśa). That which lies in this place should be thought after and one will know it."[84] "As large as is this Ākāsa so large is that Ākāśa in the heart. Both heaven and earth are contained within it, both fire and air, both the sun and the moon, the lightning and the stars, and whatever there is in this world, and also what is not,—all that is contained within it."[85] This city of Brahman, is the body,[86] the small cavity of the heart, the centre of being in man, is the place of the small ether. This place of Brahman, in the heart of man, has its analogy in the Brahmasthāna, in the centre of the temple maṇḍala or plan, where also lies the heart of the Vāstupuruṣa.[87] This centre of the temple plan, has its equivalent in the Garbhagṛha where it does not coincide with it.

Ākāśa which is prior, ontologically, to the other elements and not perceptible by any other sense except hearing, is the element which corresponds to Prakṛti, primordial substance, out of which evolves all that is manifest. Ether fills everything, it is all pervading. It is in the air and it is in the stone. It is housed within the four walls and there it extends in all the six directions, east, west, north and south, to the walls, across them and also below and above, into the foundation of the temple and the height of its superstructure. Ākāsa, ether, corresponds to the primordial substance Prakṛti, in the process of manifestation. It is the first departure into manifestation from the unchanging Pure Principle or Essence, into ever more concrete substance. This departure or transformation, while taking form and shape takes place literally, across the walls which bound it. From the 'point of view', or the centre of the Garbhagṛha, the walls around it while sheltering it, are held together by the Essence and formed by it in every buttress, profile and figure. On its outside, the mass of the temple is seen to give full exposition, in the light of day to the meaning enshrined in darkness within.

"In the beginning this Universe existed in the shape of darkness" (tamobhūtam, 'Manu Smṛti', I. 5). "In the beginning (of creation) there was darkness hidden in Darkness" (RV. X. 129. 3, 'Taitt. Br.', II. 8. 9. 4). The darkness in the Garbhagṛha is a necessary condition for the transformation which is wrought in the devotee. In darkness his change is effected and a new life is attained. The rite of Garbhādhāna had to be performed at night and also those which preceded the felling of the tree. If then the light is waved in front of the image, this illumination is an act of recognition of the God in the potent, superluminous darkness, revealed now and known further in all the images outside on the walls of the temple, of the many gods, the Devas, the shining ones, in the light of day. The effulgence, the images of the gods, which are carved on the walls and set into their niches is

[84] 'Chāndogya Upaniṣad', VIII. 1. 1.

[85] 'Chāndogya Upaniṣad', VIII. 1. 3. The 'small ether' is the 'gati', the path and origin of everything. 'Vedānta Sūtra', I. 3. 15.

[86] 'Śaṅkara Bhāṣya', Chānd. Up.', VIII. 1. 5.

[87] The Brahma-sthāna is the place of God Brahmā the deific name and form of the Brahman, the Supreme Principle.

the splendour of the Hiranyagarbha, the Golden Germ, the light which shines from the primordial Darkness. It shines from the superluminous darkness of the Garbhagrha across the walls and is seen in front of the 'ghanadvāras', the niches, their actual designation is "massive doors". Nobody can pass across them. They are irradiated from within. Through them the splendour of the Hiranyagarbha appears translated into the form of the figure of the god in each of the niches around the body of the temple. In other words, and on the 'plan', the Vāstumandala, the suns of all times are around the Brahmasthāna and in the outer border of the square, are the regents of the moon and the stars.

Close to the small dark space, within the mass of the Prāsāda and above which it rises with its superstructure, is laid the Garbha, to the right of the door (p. 126), immured within its walls. These are the manifested substance of the indwelling Essence in the Garbhagrha. The Essence leaves its impress on the walls in the four directions and the intermediate regions of space, charged with it, the walls are shaped by its impact.

The temple is the concrete shape (mūrti) of the Essence, as such it is the residence and vesture of God. The masonry is the sheath (kosa) and body. The temple is the monument of manifestation. The devotee who comes to the temple, to look at it, does so as a 'seer', not as a spectator.

Ritual action and architectural form express one and the same meaning. The structure of the temple accompanies, follows and translates into a relative permanence the rites and their rhythmic formulae (mantra). The rite for the elevation of the Temple is the Garbhādhāna, the insemination of the site with the 'seed' of the temple.

The seed is deposited at night in the womb of mother Earth, as Garbha, Germ of the temple, close to the door jamb of the Garbhagrha.[88] In the vertical, in the upward direction, which is that of growth, from below, along the jamb of the door and above it, the power of germination lifts as it were the lid of the Garbhagrha, and transcends the flat ceiling of the Garbhagrha, step by step, level by level in ever diminishing tiers to the top of the superstructure, there once again it rests and is level as the Skandha (shoulder course) before it attains its crown and is surmounted by its final.

The Garbhagrha is the nucleus of an all sided increase on the outside, in the horizontal, a stepping forth from the dark interior into expanding bulk and multiplicity of form and meaning. Its outward impact within its walls is traversed in the vertical direction by the urge of growth which corresponds to the sprouting of the seed, and leads from the broad earth and the base of the temple towards its high point even above the superstructure. A synonym for Śikhara, the curvilinear superstructure, is the term Mañjarī which means a shoot. This refers to the form of the superstructure as much as it follows logically by way of natural symbolism from the rite of Garbhādhāna. The vivifying Germ (garbha) and the Embryo of splendour (Hiranyagarbha) are within the walls of the Garbhagrha and have their images in the construction of the temple.

[88] Part IV

## (B) The Superposition of Shapes Along the Vertical Axis

The images which are given concrete form in the building of the temple have been seen and worded in revelation (śruti) and the sacred tradition (smṛti)

The Hindu temple is a synthesis of many symbols By their superposition, repetition, proliferation and amalgamation, its total meaning is formed ever anew In the vertical direction, the superposition of forms leads towards the culminating point The solid socle or base (Adhiṣṭhāna, etc ) functions as the altar on which the offering is made in the shape of the temple Its main part is the walled in, dark space of the Garbhagṛha From the vertical walls of the Garbhagṛha, the original dolmen shape, rises the superstructure and above it, the finial The high superstructure is not derived from any particular roof shape, these, in certain types are embodied in its form It is not a roof with increased height, it is a form of sacred architecture, complete in itself and is placed above the walls of the Garbhagṛha[89]

[89] Generally, the pyramid of the South Indian temples is super-added to its straight walls

The survival of the dolmen type in flat roofed temples of the mediaeval period—such as those near Jhansi (central India), at Candpur, Dudahi and Ladhaura (ASI, U P Photographs, 1937-38, Nos 6785, 6758, 6763) has been pointed out already The Megalithic 'nature' of these flat roofed temples is shown by the roof where it consists of one monolithic slab In certain flat roofed temples, moreover, the front is composed of large, vertical stone slabs (Śiva temple in Kuttikondabilam, Guntur , ASI, Madras Photographs 1036-7, No 528)

The height of the storeys (bhūmi) of the pyramidal superstructure diminishes, on certain temples, in an arithmetical progression , each successive storey is ¼ or also ⅕ less than the lower In this progression however is not included the ground floor (samsthāna) of the temple In order to moderate the abrupt superposition of the pyramid with its miniature storeys on the relatively high wall of the 'cubical' Garbhagṛha, this wall frequently appears divided externally in two storeys, each complete with its base, pillars, capitals and roof cornice This architectural consideration belongs to the Cola age (Temples at Tanjore, 1000 A D , Gangaikonda Colapuram about 1025 A D ) , and while later temples show an increase in the number of simulated storeys on the walls of the Garbhagṛha (Temple at Tiruvarur, about 1600 A D ), Pallava temples are free from this aesthetic deceit (Shore temple at Mamallapuram, Kailāsanātha temple at Kāñcīpuram (650-700 A D approximately) See Plates LI LIII , LVII LIX in P Brown, 'Indian Architecture' and Part VI

The superposition of the pyramidal, storeyed form on the vertical walls of the Garbhagṛha, though generally is not necessarily always observed The pyramidal structure of the Vaikuṇṭha Perumal Temple (ib Pl LIV) rises directly from its socle Here too, the storeys are not simulated, miniature replicas , they house a Garbhagṛha on each floor In the majority however, of the temples in South India, including the Kanarese country, a complete structural pyramid of this type, appears raised on the Samsthāna, the groundfloor or one storeyed temple This development appears already completed in the seventh century rock cut temple models which an ingenious king (Narasimhavarman) was pleased to have cut out of the rocky boulders near the shore of Mamallapuram

The diminution of the height of the Bhūmis of the superstructure of a South Indian temple is carried out according to more than one consideration, such as the number of these 'storeys', etc (see Part VII, Chap 5)

In Northern India, the diminution of the Bhūmis of a curvilinear superstructure such as the Śikhara of an Orissan temple does not form a series , if, for example, there are ten Bhūmis, of

Above the superstructure and no longer part of the body of the temple, is the finial or Stūpikā, it is however proportionately related to the body All these shapes are piled one upon the next, along the vertical axis It connects the central point of the floor of the Garbhagrha with the high point of the finial

On this vertical axis are threaded the levels of the building, its floors (bhūmi) and profiles, their projections and recesses Expansion proceeds from the central point of the Garbhagrha, in the horizontal, in all the directions of space, this spread with its proliferation and particularisation is gathered up towards the apex, the broad mass with its many forms is reduced to a point, beyond its total form

The piled up altar, the base, the dolmen-cell, the Garbhagrha, and the superstructure are the architectural constituents of the whole image of the temple, it rises like a mountain Its mass diminishes while it is drawn along the vertical to a high point, straight above the centre in the dark small space of the interior The image of the mountain and the cave is known in nature, and is given form by the architect This total aspect of the temple is not in continuation of an extant architectural type like its parts, the altar, the dolmen, the Tabernacle and the other constituents of its superstructure It preserves however as they do, the memory of a cult, the cult of caverns, and this corresponds moreover to the immediate realisation of the cavity of the heart These are immediate symbols in nature and in man, to this day the Himālayas are full of natural caves, small or large, and sacred

The cave temples are an elaboration of these primeval sites No architectural forms however were evolved there, on the contrary, forms of structural buildings were adjusted to the exigencies of the rock, pillars for instance increasing in

which the lowermost has 5 units, the height of the following is 4 7/16, 4, 3 15/16, 3¾, 3⅝, 3 9/16, 3 7/16, 3 5/12 and 2 ('Canons of Orissan Architecture', op cit p 111)

No diminution however in a geometrical progression can be seen, as stated by M M Ganguli, 'Orissa and Her Remains', p 128, on the accompanying Plate II

Apart from the main types of the superstructure and their several components (see Part VI) efforts are documented in the centuries around the beginning of the present era, of superimposing and combining buildings along the vertical axis

An ancient type of temple consisting of two super-added buildings is shown on the reverse of Audumbara Copper Coins (Fig 16, Pl I of J N Banerjea, 'The Development of Hindu Iconography') The lower part of the structure has a sloped roof, above it is placed a smaller structure which also has a sloped roof This type of a Śiva temple, of the second to first centuries B C in the Panjab, in the superposition of structures, resembled Bengal temple types (Gauriva) of the present day, in Bengal and Orissa Their roofs are sloped and curvilinear Buildings of these and similar types preceded, and contributed to, the formation of the superstructure of the temple (Part VI)

Another ancient form of the temple is represented in Barhut, about 100 B C and in Mathurā in the second century A D (Coomaraswamy, 'HIIA', Figs 42 and 70) In these reliefs a small, domed shrine is encased in another structure which is roofed by a series of superposed 'slabs' of increasing width, the topmost forming a flat and crenellated roof This method of superposition and encasement though it is neither represented by any of the later temples nor mentioned in Vāstu sāstra, corresponds to the vision of the Throne of Supreme Blessedness on the Brahmānanda mountain (Shri Svami Hariharanand Sarasvati, 'Visnu, The All-Pervading Principle', JISOA, XII p 154)

Re the various combinations contemporary with the main types of the superstructures, which were not destined to become leading types, see, for example, p 169, note 94

width so as to support the weight of the hill which in part rested on them Layana, place of rest, is the name for rock cut temples They have no Śreni, which means no superstructure with its cluster groups of similar shapes, they are without buttresses (niryūhaka), while a circumambulatory (bhrama) and windows (gavāksa) should be carved in the rock ('Samarānganasūtradhāra', LIX 236-237)[90] in imitation of structural temples

Symbols such as the vertical axis or pillar along which the varied forms are threaded on different levels or the cave in the mountain, and architectural forms such as the convergence of ascending lines which connect the perimeter of the building with the end of its vertical axis, or the various shapes of the superstructure, these and other images and forms constitute the symbolical and concrete structure of the temple The temple under the name of mountain resembling it by its peaked form, is always the One Mountain, an image of manifestation in its hierarchy along the central axis of being This axis passes through all the strata of existence, and shows them linked to the highest point, at different levels[91] From the highest point the line passes in the centre and pierces the ground in the middle of the Garbhagrha where the Linga or image is From the perimeter of the Prāsāda towards its highest point rises the bulk of the building, a vesture of the central axis, in its folds and throughout its extent, it is an exposition of the total meaning of the temple in the particular application to each single spot

The names of the three first temple types recorded in the early texts are those of the Mountain, Meru, Mandara, Kailāsa, another type among the twenty temples

[90] The Layana is equipped moreover with stairs, a gateway (pratolī), roll cornice (viṭanka=kapota-pālikā) on the façade, and doors It is raised on a socle (vedi) and has a portico (prāgrīva) This description refers only to cave temples such as those in Bādamī The cave temples, in the earlier examples (3rd century B C —6th century A D ) are interiors only, having a façade, to these types were added (Mamallapuram, Elura, Kalugumalai), complete replicas of structural temples hewn out of the rock in their exterior, and excavated within (Kailāsanātha Temple and Indrasabhā in Elura) Although the last named temples are, the one Hindu, the other Jain, the majority of the rock cut temples and sacred abodes are Buddhist Out of a total of 1200 rock cut temples 900 are Buddhist, 200 are Jain and 100 are Hindu Some of the sanctuaries in Elura (Dasāvatāra, etc ) and the Śiva temple in Elephanta are, though posterior to the sixth century, interior excavations only with a façade Re these, and later excavations in Northern India—at Dhamnar (Rajputana) and Masrur (Kangra) see P Brown, 'Indian Architecture', (Buddhist and Hindu), Chapters V, VI, XII and XI

The square, dark, small Garbhagrha is not transferred from the cave temple to the structural temple The flat roofed 'Gupta' temple is not derived from Brāhmanical excavated sanctuaries contemporary with it (Udayagiri in Bhopal, etc ), nor from earlier excavated cells with a flat ceiling, the early rock cut sanctuaries have domed or vaulted interiors, whereas cells and halls in the rock cut monasteries have a straight ceiling There is no scope for a flat roof in rock cut temples, the Caitya halls prior to the Gupta age, it belongs to the flat roofed porch only of the sanctuary proper The flat roof of the rock cut Kailāsanātha Temple in Elura of the eighth century is in imitation of a structural temple of that age

Any shape can be cut into the rock, no structural form is born there

[91] Rene Guenon, in 'Le Symbolisme de la Croix' and other works has made clear the meaning of these and other symbols, A K Coomaraswamy has explained them in their application in art P Mus has interpreted the Barabudur in the aspect of these perennial symbols

In the 'terrace temples' at Ahicchatra, etc, the axis or shaft cuts across the terraces, the shrine, in continuation of the shaft, rises from the highest terrace

described in the 'Brhat Samhitā' is called Guharāja, King of caves (LV 17)[92], it is equally telling by its name as the four last named types, in chapter LV of the 'Brhat Samhitā', the Round, the Square, the Octagonal and the Sixteen sided one are by their form, which should be dark inside, "so that light from outside will not enter these Prāsādas" ('Br Samh ' LV 25, 28, with comm )

Guharāja, King of caves, is a name as suggestive as it is unique among the ever-increasing types of temples enumerated and described in the texts[93] The name however occurs also as that of actual temples, such as the 'Kurāja (Guharāja) Bir' Temple[94] Kuhara, or cave, is a synonym of Śālā, or room, in the 'Bhavisya Purāna', where the type of temple, called Meru, is described as having many Kuharas (ch CXXX 27)[95]

The language of the texts connects the mountain and the cave while describing works of architecture, or forms of nature and also the residences of different classes of gods, Devas and Dānavas, Pannāgas, Yaksas, Rāksasas, Guhyas, Gandharvas Vidyādharas, Siddhas, Kinnaras and Apsarās who live in Indra's grove on mount Sitānta full of rock and cave-houses[96] The 'Vāyu Purāna' tells of the various kinds of residences of the gods on the different mountains[97] It is a topography of the mountains where the gods reside and of their habitations on an Olympus with many peaks[98], it is not a description of temples built by man on mountain tops for the gods to dwell in

The caves are ancient residences of the gods. It is there too, and not only on the banks of rivers that they love to dwell, their presence there is felt so strongly that cave and god are one, "on the Visākha mountain there is a great dwelling belonging to Guha, the Secret one (Kārttikeya), the god who is very fond of living in caves" (guhā, 'Vāyu Purāna', XXXIX 55) ' To these natural habitations of

[92] 'Bhavisya Purāna', CXXX 32 which derives from the Br S, or from a source common to both, substitutes Grharāja for Guharāja, see Part VII, 2nd chart (cf also S S Ch XLIX 16, 160)

[93] The 'Samarānganasūtradhāra', LIX 193-197, describes the temple called Guhādhāra its name however is derived from the division of the door-frame (dvārabheda) into several compartments (guhā) as it is also described elsewhere

It should resemble the temple Simha This possibly includes a half forgotten identification of the temple type called Simhāsya ('Matsyapurāna', CCLXIX 28) and the Guharāja of the 'Brhat Samhitā' (see Part VII, second chart) "Visvakarman has described 3000 types of temples" says the 'Bhavisya Purāna' CXXX 36

[94] ASIAR, 1915-16, Pt II, p 17 It is situated between Deogarh and Candpur in central India This temple, of about the 9th century, similar in this respect to the Pārvatī temple at Nachna Kuthara has on the flat roof of its Garbhagrha, another though smaller cubical sanctuary—and on top of this a curvilinear Śikhara In principle, the two temples types, the one with several storeys and the other with a curvilinear Śikhara are placed here one above the other

[95] The Ānanda Pagoda in Pagan, Burma, being a 'Ku' or cave has such Kuharas, 'caves' or halls, in the 4 directions, radiating from a massive centre The Burmese name for structural brick temples is 'Ku', cf note 104

[96] 'Vāyu Purāna', Ch XXXIX 55-57 (saila grha, guhā-grha)

[97] Ib, sl 1 This does not mean, as P K Acharya, 'Indian Architecture', p 21, opines that "the 'Vāyu Purāna' maintains its unique position by dealing with the construction of various temples built on mountain tops'

[98] Ib, śl 57, the large residence (bhavanam) of Kuvera and also 'Harmya prāsādas' are described on mount Pisācaka

the gods have to be added, as places of worship, retreat and congregation, other natural caves and also those cut into the rock for similar purposes The Ājīvikas, a Jain sect, and the Buddhists were the first to do so, they were non-orthodox Within Brāhmanism, the substitution of excavated caves for natural ones took time to evolve There, as elsewhere, the sacredness of the particular site was to begin with, sufficient in itself, the Tīrtha, in this case was specially marked by its being a cave The heterodox sects preceded the Hindus by many centuries in their interference with, and transformation of nature They had already achieved magnificent results in such large, apsidal vaulted 'churches' as the cave temple at Karli and in rock cut monasteries like those at Nasik or Ajantā (Nos 8, 12, 13), when about 400 A D Brāhmanical worship cut its entry into the rock It has the shape of a small, flat roofed Garbhagrha To it is added, as in the contemporary Gupta temples, a structural porch or mandapam (Udayagiri, Bhopal, C I)[99]

No apsidal temple was cut into the rock for Visnu, Śiva or any Brāhmanical form of divinity[100] The rock cut Hindu Garbhagrha is an equivalent of the structural flat roofed stone temple[101], yet it is also preceded by the small, single rock cut cell and also by those which surround in numbers Buddhist monastic halls[102] It is however significant that a relatively large cell, at the centre of the far end of the hall and serving as the main sanctuary, appears in the Buddhistic excavations[103] only at an age when the flat roofed Garbhagrha had been set up in stone Prāsādas and cut into the rock

In the temple at Udayagiri, for the first time the walled in stone quadrangle as it were entered the mountain, one stone-form, that of the dolmen, was put back

[99] This earliest Brāhmanical rock-cut temple is amongst the earliest fully preserved Brāhmanical shrines It dates from the reign of Candragupta II, 382 401 A D (Cunningham, ASR, Vol X, p 41) The dated Ājīvika caves in the Barabar Hills, Bihar, were excavated in the reign of Asoka, in the 3rd century B C

[100] The apsidal plan was however adjusted to the use of Brāhmanical worship in structural temples, such as the Kapotesvara temple at Chezarla, the Durga temple at Aihole, etc, and according to the 'Samarāṅganasūtradhāra' (Ch XLIX) must have been widely used Cf also SS XLIX 103-4, LII 17, the Hastijātiva" type based on the square plan

[101] In the Lad Khan, Kont gudi and 2 other small temples at Aihole, the Garbhagrha on the other hand is built against the back wall of the pillared hall (ASIAR, 1907, p 201 f), this position would correspond to a Garbhagrha cut deep into the rock and preceded by its mandapa

[102] Garbha, Pāli 'gabbha', is also the name of rock cut cells of the Buddhist monks connected with their large monastic halls Such an establishment is called a 'navagabha Mandapa' (Karli cave inscr, 'Ep Ind', XI, p 119), if there are nine 'gabha' or cells, or also 'paca gabha mandapa' and 'sattagabha mandapa', when their number is only 5 or 7 (Junnar cave inscriptions, pp 131, 136) Any small room is finally called 'gabbha', in Pāli texts and denotes various kinds of chambers or rooms ('Cullavagga', VI 3 3) which may be square or rectangular, etc The use of terms such as 'pāsāda', or its equivalent 'vimāna', gabbha, and also 'guhā', cave ('Cullavagga', VI 1 2) in civic architecture is also current in the Epics

Dhātugarbha (dagaba) is the stūpa as receptacle or womb of the relics (dhātu) of the Buddha

The Buddhist rock-cut cells again had their equivalent in structural cells, these in stone buildings, such as are preserved in Gandhāra were also used as shrines for a Buddhist image or a stūpa (Takht-i-Bahai) In this particular instance however they are not square, but rectangular, etc, and they have not flat roofs

[103] In Vihāra No 5 for instance in Ajantā, or No 3 at Aurangabad

into the primeval stone, the living rock There the Gàrbhagrha retained its flat roof by adapting a natural ledge of rock

In the quest for secrecy, the enclosure of the shed in Vedic rites, or also of the dolmen for purposes of the Hindu temple, was one way of attaining it Another way less widely and only comparatively later resorted to in architectural form by the Hindus, led to cutting into the interior of the mountain, the living rock The final solution is the Garbhagrha within the Prāsāda with its superstructure like a mountain

The type of temple called Guharāja, has the shape of a cave (guhā) according to Utpala (Comm , Br S LV 25) Its height, 32 cubits, follows the general rule of being twice the width of the Prāsāda, and implies a superstructure as high as the walls of the Garbhagrha (Part VII First chart) This King of caves, Guharāja, whatever its actual shape was, shares part of its name with Burmese brick built temples In Burma, brick built temples with inner spaces are simply called 'Ku' or cave [104] One of the temples at Pagan bears the name Shwe Ku, Golden cave The Burmese Glass Palace chronicle tells about the erection of the Ānanda temple of Pagan, how King Kyanzittha requested eight Arhats to produce by their concentrated thought an image of the cave Nandamūla in the Gandhamādana mountain This they did and the King built a large Ku=Guhā, a 'cave', or temple in the likeness of the cave Nandamūla and called it Nanda [105] The name of the cave, which properly is the Garbhagrha, appears here as that of the whole Prāsāda

Cave and Mountain, in the architecture of Greater India are names for the total temple, Ku (Guhā) in Burma, Giri (mountain) in Cambodia and Meru, in Bali [106] In India itself, and originally, they denote the interior respectively[107] and the high exterior shape of the Prāsāda The interior with its cave darkness corresponds, to the deity known 'ab intra' The exterior with its mountain slopes along the superstructure and the perpendicular walls of the Prāsāda displays to the light of day, the seed which has taken root, and sprouted

Yet another secret place which also became integrated into the temple, is the place of the Omphalos, in the womb of the earth and below its surface The cave, under-ground, the crypt,[108] is the main Garbhagrha of several preserved temples

[104] R Heine Geldern, 'Weltbild and Bauform in Sudostasien', 'Wiener Beitrage zur Kunst und Kultur Asiens', Vol IV, p 63 The central space in the Ānanda temple, Pagan, is a brick mass , the 'caves' are in the four directions

[105] Ib , p 15 The Gandhamādana mountain, acc to the 'Visnupurāna' II Ch II, 17, lies to the south of Meru Cf note 78

[106] L Finot, 'Sur quelques traditions Indo Chinoises', 'Bull de la Commission Archeo gique de L'Indochine', 1911, p 20 , J C Von Eerde, 'Hindu-Javaansche en Balische Eeredienst', 'Tijdschrift voor Indische Taal, Land en Volkenkunde', LXV 15-16

[107] The 'water in the cave' is in the Garbhagrha the water with which Linga or image are laved in the daily rites It passes from the image to a drain (pranāla) on the floor which traverses the middle of the north wall of the Garbhagrha, and leaves through a spout carved in the likeness of a Makara, etc The water in which the Linga or image has been bathed is sanctified and therefore is made to flow to the north The Ganges too, is most sacred where its course turns northwards The northern direction implies an upward course, back towards the origin—high up in the mountains and higher still, in the celestial region

[108] Guhā (cave) and 'gupta', secret, both from the same root, appear also as verbal equivalents of the 'crypt'

Tamas, darkness, is the descending tendency, it is the quality proper of the under-ground crypt Above it, the Prāsāda arises, ascends in height according to the Sattva-guna, and expands its perimeter as far as Rajas, requires it [109] Tamas, darkness, is the causal body, the 'kārana rūpa' As it was in the beginning when out of primordial darkness evolved all things that be, so also from the deep, central darkness of the Garbhagrha the meaning of the temple shines forth on its walls and reaches the high point of the finial Thus in certain temples there are two Garbhagrhas, above the crypt-Garbhagrha is the upper sanctuary, accessible or visible to all The secret chamber of the Sūrya temple at Modhera, Gujerat, built in 1026-1027 A D , is sunk to eleven and a half feet below the level, and is under-neath the floor of the Garbhagrha of the temple [110] At Aundh, the principal Linga is in the crypt below, in the upper Garbhagrha is another Linga, steps lead down into the crypt from an opening in the floor of the upper shrine [111] The present-day temple of Somanātha, Pattan, Kathiawar, also has a lower shrine It surrounds the Somanātha Linga, symbol of the self existent Omphalos A 'duplicate' for every day worship is in the upper shrine [112] In the Jambukesvara temple, near Trichino-poly, in South India, the Garbhagrha below the level of the ground enshrines a Svayambhū Linga standing in water The great sanctity of the non-man-made Linga, the hidden darkness of the not only innermost, but also of the lowermost, Garbhagrha, are proper to the Guhā, the secret chamber, around the omphalos, the navel and centre of the Earth and of Being, of this the Ādhārasilā is one symbol and its place is the same [113] Above it is the Garbhagrha for the daily rites, and above these graded levels of secrecy and sanctity is the superstructure The finial above it shines golden, high up, straight above the omphalos, or centre of the Garbhagrha, the womb and cave in the mountain Or else no floor separates the lower and the upper chamber, they are one, only the sunk level is preserved The one and only Garbhagrha is often much lower in level than the hall, the Mandapam by which it is approached, stairs lead down to it, to a depth of seven or eight feet, or less,[114]

[109] The three Gunas, Sattva, Rajas and Tamas, active in every form of manifestation, have in the form of the temple a comprehensive visual symbol

[110] J Burgess—H Cousens, 'Architectural Antiquities of N Gujerat', ASWI, Vol IX, p 73

[111] ib , p 75 About the temple at Aundha, Hyderabad, Deccan, where the floor of the Garbhagrha is considerably sunk below that of the mandapam and the Linga is not seen from the "hall doorway", see H Cousens, 'Mediaeval Temples of the Dakhan', ASI IS Vol XLVIII, p 78

[112] Cousens, 'Somanātha', etc ASI IS XLV p 28

[113] The underground situation of the place of greatest sanctity has been explained as a protective measure from the Mohammedans, as all the temples where it is so placed, were built when the Muslims had entered India Apart from the fact, that the vast majority of preserved Hindu temples dates from these centuries, (10th to 12th), the presence of the Svayambhū Linga, the natural Omphalos, disproves the assumption

[114] In the temple of Amaranātha (Ambarnath), Thana District, Bombay, 1060 A D , the floor of the shrine is sunk below the outside ground level and about 7′ or 8′ lower than that of the hall Stairs descend to it The possibility of an original shrine on the same level as that of the hall (Cousens, op cit , p 13) does not detract from the fact of the sunk level, as it now is, of the Garbhagrha Other temples in the Deccan, in Gujerat, Rajputana, the Central Provinces and Orissa are sufficiently widely distributed to be valid examples of a practised form of worship and architecture In the Deccan, the Nāgesvara temple at Karjah (Ahmednagar; l c , p 58) has a shrine of which the floor is 6′ below the floor of the hall approached by a flight

the actual extent into depth finally is immaterial as long as the descent is marked by the level of the floor being lower than that of the threshold, be it even by one step only In Orissa, the name for the Garbhagrha is Gambhīrā, the deep lying

The different levels below ground and above producing two sanctuaries are destined for various rites, they are not restricted to a definite position The dividing line may be the ground surface, it need not however be only there but is applied in the vertical direction so that one sanctuary is above the other Made independent of a definite level, the principle is that of vertically superposed sanctuaries This is known from Gupta and Early Cālukyan temples, in northern India, the Deccan and in South India It is as if the sanctuary from below the ground with its omphalos in the shape of Linga or image had arisen to the higher levels Sanctuary upon sanctuary, they are superposed in several storeys, particularly and consistent with the total symbolism of the respective temples, in South India There, the special application of this principle is to those temples of Visnu where in seven superposed storeys, the lowermost cell enshrines the standing (sthāna), the next higher one the seated (āsana), the one on the third floor the recumbent (sayana) image of Visnu, as in the Vaikuntha Perumal Temple at Kāñcīpuram, and in the yet higher storeys the images of Brahmā, Mahāvisnu, Sadāvisnu and the four armed Nārāyana "Like a hollow cane of bamboo (venurandhravat) are the cells placed one above the other in the vertical axis of the Prāsāda" ('Vaikhānasāgama', VI) [115]

The ascent of the cave along the vertical axis of the Prāsāda is by a twofold process, which is one in nature, by coalescence, and reduplication or repetition, the crypt arises on to higher and higher levels The vertical axis of the Prāsāda always passes through its centre [116] By its ascent from underground, the crypt

of steps leading down from inside the shrine doorway The ante chamber is 2′ lower than the hall floor, a graded descent to the origin and centre, just as inversely, the superstructures with their finials, of several halls mark the graded ascent, level upon level, in many 'bhūmis' towards the final point on high (Pl I) As above, so below, with the corresponding changes of direction, form and accessibility The sunken shrine of the Śiva temple of Lonad (Kalyan) is three feet below that of the Mandapa (ibid, p 21)

The shrine of the Śiva temple at Rajur (Buldana) is still deeper than that of the temple of Amaranātha, and similar to it is the temple at Chandol (Burgess-Cousens, op cit, p 15) In Rajputana, in the temple at Visalpur, near Deoli, of the year 1174 A D the Garbhagrha is three and a half feet lower than the Mandapam (Cunningham, ASI Report VI) The Jyotirlinga temple of Onkāra at Mandhata (Narmada, Cousens, 'Mediaeval Temples of the Dakhan', p 13) and the temple of Boram Deo (near Chapri, Chattisgarh, ASI vol XVIII p 34) show also by the difference of floor levels of Garbhagrha and Mandapa, the secret (gupta) nature of their crypt and sanctuary, the Garbhagrha

In many of the temples in Bhuvanesvar, Orissa, dating from the ninth to the twelfth century (Mārkandeyesvar, Bhāskaresvar, Pāpanāsinī, etc) the floor of the Garbhagrha is several feet below that of the 'Jagamohan' or Mandapam

The so called "Bhāskaresvar" temple (M M Ganguly, l c) is called Meghesvar by the local people and *vice versa* The above remark refers to either of these shrines

[115] Cf the construction of the Lingaraja Prāsāda, Bhuvanesvar, and others, note 49

[116] The plinth or also the terrace on which the temple stands do not necessarily take part in this vertical extension Some of the highest Prāsādas, especially in Orissa, as those of the Lingarāja Temple, Bhuvanesvar, (middle 11th century), have no socle The Prāsāda rises straight from the ground, although lesser temples, but not the very least ones rise from a plinth (M M Ganguly, 'Orissa and her Remains', p 107)

comes to take the place of the cave in the mountain, which is the image of the complete Prāsāda with its superstructure

In some shrines (Kandarīya Temple, Khajuraho, Fig i, Pt VI) the Garbhagrha far from being lower is even higher in level, than the Mandapam It is raised into the height of the Śikhara, itself partaking in its ascent

In the terrace temples (p 149) a hollow central shaft below the high sanctuary is extended vertically across the terraces [11]

The superposition of cavities, in the interior of the temple, took place along the vertical axis, below ground and above, on various levels In principle, it inheres in the temple with its high superstructure The buildings however, but for the type of the Vaikuntha Perumal temple, do not show the vertical series of their internal cavities

The underground crypt is secret, and in the vast majority of temples there is but one Grabhagrha, closed on top by a flat ceiling or shallow dome which seals, as it were, at the same time, the interior of the superstructure (Fig i, Part VI)

The Garbhagrha, the Cave in the Mountain, lies below its highest point Along this axis, on any level of the temple, there is, in principle, this secret centre Even though it is inaccessible from within, its position is marked by the superimposition of surrounding storeys (bhūmi) on the monumental body of the Prāsāda (Fig h, Part VI)

The sum of all the possible cavities, one above the other, in the centre of the temple, is "like a hollow reed" It traverses, in principle, though not structurally, the temple from the apex to its foundation On top of the superstructure, the "hollow reed" or shaft is seen to emerge from the body of the temple It exceeds it by a short span and is crowned by a 'dome' (Figs f-h, Part VI) or by the Āmalaka (Fig i, and Pl I) of the temple

The socle (pīṭha) where present, is a solid substructure, the upper surface of which forms the floor of the building The crypt may be within the socle or base or extend below the outside ground level The Pīṭha, where present, is piled on top of the completely filled in, solidly, or by cells, originally excavated site of the entire building This is the general practice and the texts corroborate it

[117] This and all other information about Ahicchatra has been received by the courtesy of Dr R E Mortimer Wheeler, Director General of Archaeology in India, through Mr A Ghosh, Superintendent of Archæology, Excavations Branch, who writes "Of the two most prominent temples at Ahicchatra, one was more or less completely explored, while the other and bigger one had to be abandoned before it could be fully understood There are some other temples

Both the temples underwent several repairs and restorations, resulting in horizontal and vertical increases in their dimensions In all their stages, however, they are square in plan with projections on the west for flights of steps

The fully exposed temple has three storeys in its last three stages The first and earliest stage being buried very deep below the later superstructures was imperfectly explored

The plan of each single storey is square There is no shrine on each storey, the only one being on the top Each terrace leaves a sufficient space between the central part and the parapet for serving as ambulatory

The axis of the temples consists of a hollow central shaft, filled with debris, on the top of which the sanctuary was erected In neither case has the central shaft been exposed to the lowest depth In one case it was dug down to 12 feet from the top

The earliest stage of the temples evidently belongs to the Gupta period, as one of them was founded on a level yielding typical pottery of the Kuṣāṇa period They continued in their last stages till the end of the tenth or eleventh century"

## (C) The Form of the Vertical Axis

The Prāsāda is the place and symbol, by means of architecture, of manifestation and reintegration For this purpose it is built All the images together with all the forms that may serve them are incorporated in its structure

India not only thinks in images It builds them up in a consistent body of which the sum total is the temple It takes them from the store house of memory, similar forms once used in sacred rites meet, fuse, are absorbed the one in the other and contribute their particular meaning to the new context The small space of the Garbhagrha is extracted from various confines and placed within the walls of the Prāsāda The dolmen, from the aboriginal side, has been incorporated into the Prāsāda and raised on a socle (adhisthāna) so that it is ensconced within its mountainous shape, and similarly, from the Vedic tradition, the sacrificial shed[118], as an enclosed ritual place, shares in its closeness as much as the images of the cave in the mountain, of the heart and the womb

The vertical axis of the Prāsāda leads from the Highest Point, the summit of its finial, above its body, to the centre of the Garbhagrha It is not visible from outside, except where it emerges from the body of the superstructure, having the appearance of a horizontal section of a pillar, round, as a rule (Pls I, LXXI ) but also polygonal (Fig f, Part VI) This pillar is also not visible from inside the Garbhagrha which, as a rule, has a flat ceiling Nonetheless it inheres in the Prāsāda however solid a monument its superstructure is, it traverses it like a hollow reed On whatever level the Garbhagrha is situated this hollow reed passes through its centre The pillar inheres in the Prāsāda, which is the universe in a likeness The Pillar of the Universe, the Axis Mundi, inheres in the World Mountain All its strata are placed along its axis and their totality is the sheath of the Pillar It has the shape of the Prāsāda [119]

The pillar within the Temple corresponds to the vertical channel marked by the Svayamātrnnā stones of the Fire Altar In it move the immanent breaths of earth, air and heaven (Ś B VIII 7 3 13, 19, 7 4 1), to the heaven-light (VIII 7 4 6) The Agni finally is bestrewn with chips of gold (VIII 7 4 7-9), the finial too, shines golden above the multiform body and raiment of the temple

The World Pillar inheres in the World Mountain and transcends it where it becomes visible above the highest stratum of the superstructure The mountain shape of the Prāsāda is the sheath of its vertical axis The vertical axis is clothed in it, from the floor of the Garbhagrha to the shoulder course of the superstructure, from there however it is seen to exceed the body of the superstructure (Śikhara, in Nāgara temples, the series of Bhūmis in Drāvida temples) Encased in the

[118] The rectangular wooden temples of Malabar and their stone replicas (Bhatkal) are relatively nearest in type to the "shed"

[119] Venukosa or 'sheath of the reed' is one of the synonyms designating the superstructure Cf The 'mantle' (kañcukā) of the Stūpa (cf Coomaraswamy, 'The two reliefs from Bharhut in the Freer gallery', JISOA, vol VI pp 149 62)

vertical shape of a pillar, which is circular, as a rule, or polygonal (Parts VI and VII), it transcends the slopes of the superstructure although for a short distance only It is therefore called Grīvā or Neck [120] It emerges from the body of the Prāsāda to be capped by a dome (Figs f-h, Part VI) or clasped by an Āmalaka (Pls I, XLIII, LXXI) These crowning shapes of the Pillar support the finial of the temple Its Highest Point, the end or beginning of the axis of the temple, is in the centre of the hollow shaft above the Linga or image in the Garbhagrha, above the Womb and Centre of the Cosmos and above the Navel of the Earth

The finial is beyond the body of the temple, which has its extension in Antariksa, the mid-space Above its High Temple (harmya) and cupola (sikhara), (Figs g-h, Pt VI),[121] above its being gathered by the Āmalaka[122] (Fig i) rises the finial, the Stūpikā, in the Empyrean and up to the Bindu, its Highest Point, the limit between the unmanifest and the manifest

[120] The proportionate height of the Neck (grīvā) is given in Part VII, it varies in the different types of the temple The Grīvā of a South Indian Prāsāda connotes the walls of its High Temple (Vimāna, Harmya)

[121] In the South Indian tradition Śikhara connotes the dome shape crowning the shaft of the Pillar Śikhara in the North Indian tradition however is the curvilinear superstructure of the Garbhagrha

[122] Āmalaka is derived from 'mal', which means "to gather", see Part VIII

# VI

# THE SUPERSTRUCTURE

शिखरस्य तु भेदेन सर्वेषां भेदमुद्दिशेत् ।

"One should point out the differences of all (the Vimānas) from the differences of the Śikharas."

'Īśānaśivagurudevapaddhati', III
Chapter XXVIII 42

# VI

# THE SUPERSTRUCTURE

## I THE PYRAMIDAL SUPERSTRUCTURE

"On an enclosed space they hold the laud in order that they may encompass the Brahman" ('Pañcaviṁśa Brāhmana', IV 9 11) To encompass the Brahman, to build up in space a compartment corresponding to the Brahmasthāna on the plan, the Vāstupurusamandala, the dolmen lent its stone walls, they were raised on a socle A flat roof which served also as ceiling shielded the enclosure on top The all filling presence of the Brahman, as Brahmā or manifest divinity, was marked by a Linga or was centred in an image of the respective divinity The temple was thus complete in the shape which it has in Unchahara, or in the Gupta shrines of Central India Enclosure, concentration in secrecy, and their elevation on a level above ground are thus attained and given form, but not as yet has the purpose of this concentration in secrecy been given its architectural form or outward effect The image within the cavity had itself been raised on a socle, its altar, upon the base of the temple In this repeated raising of the object of concentration on a higher level, an impetus finds expression in the vertical direction, concentration on the divinity and the elation that accompanies it bring about the elevation, the deity is extolled on ever higher levels until its worship reaches the highest point, *the zenithal pole of realisation where this world ends and that world begins*, the point limit of the manifest and unmanifest, the Bindu

Works of architecture serve a purpose, the Hindu Temple as much as a Gothic cathedral exceed their function of being a house or seat of divinity While their orientation and expansion are in the four regions of space, their main direction, in the vertical, is towards God, the Supreme Principle, which is beyond form and above His seat or house of manifestation From all the regions of space, from its walls in the four directions and their corners in the intermediate directions, the Prāsāda rises bodily towards its high point, tier on tier, until diminished in its bulk it forms the High Altar (vedi) on which is placed the crowning High Temple or the Āmalaka with its finial that ends in a point

Metaphysical knowledge and realisation by religion have their visible residue in architectural form, in its fundamental shapes and their relation The square and cube of the walls of the Garbhagrha, seen from outside, encompass the Centre, thence they rise to the Highest Point by way of the pyramid or such similar shapes which effect a transition from the square of extensiveness, the Vāstu, and from its enclosing walls to the point The pyramid or its curvilinear equivalent, the

Śikhara, placed on the cube, are the inevitable form of the superstructure of the Vimāna

The pyramid or its curvilinear equivalent is the superstructure on the walls of the Garbhagṛha (Figs h, d, Pls I, XLIII, LXXI), the means by which the purpose of the temple is shown to those who come to see it (darśana) and to attain release Inside the Garbhagṛha, in the interior of the temple, the superstructure has no effect but that of darkness if it is hollow, a ceiling, however, as a rule, occupies the position of a flat roof

The Liṅga or image in the Garbhagṛha, the main object of worship, is the place sought after by the devotee, the Centre where he is made whole To this centre also leads the vertical, from the high point to which his eye and mind while he approached the temple had been led by the superstructure The interior cavity, the Garbhagṛha, is the place of release, the external form of the Prāsāda is its monument Extended in space, its body is reduced to a central point even beyond its bulk [1]

The Prāsāda is piled up with the logic inherent in fundamental form, cube and pyramid for example yield the meaning of their co-ordinated shape along the vertical axis In terms of volume their combination is the result of expansion and then of concentration and contraction, the total monument, the Prāsāda, is a symbol of manifestation on its vertical walls and together with them of its gradual reduction to the point above the sloping sides of the superstructure

Such one-pointed monumental forms are not seen in the representation of sanctuaries preserved in early Indian art, in the Buddhist reliefs carved from about the second century B C to the third century A D To the Buddhists, it seems, Prāsāda meant palace and temple as well, whereas in Hindu temple, the Prāsāda proper with its superstructure leading to the Highest Point, cannot be mistaken for, or derived from a palace or any dwelling of man

The term Śikhara was established in Vāstu-śāstra, the texts on architecture, which are known to us from the sixth century A D onward only There it refers to the superstructure of the Garbhagṛha, in the fully evolved Hindu temple north of the river Kistna it is the most conspicuous, indispensable part of the exterior of the Prāsāda The Śikhara is here understood as the mountain or peak like super-structure above the perpendicular walls of the Prāsāda It is curvilinear, as a rule

In its most widely accepted types, the superstructure comprises the parts which are either a curvilinear and truncated body, a neck (kaṇṭha, gala, grīvā) and crowning part (āmalaka, Pls I, XLIII, LXXI) or a pyramidal truncated body and on it a small High Temple (vimāna, harmya) whose 'walls' form the neck (kaṇṭha, gala, grīvā) of its massive dome-shape as the crowning part (Figs f-h) Śikhara in the present context is used to denote the whole super-structure including the 'crown' and up to the finial, this is the generally accepted meaning in early Vāstuśāstra

In South Indian texts, however, the pyramidal superstructure is designated by the number of its storeys (bhūmi) whereas Śikhara is the name of the dome-shaped massive roof of the small crowning miniature temple only (vimāna = kṣudra-

[1] The entire Prāsāda is a superstructure on the Vāstupuruṣamaṇḍala

alpa-vımāna, see Pt VII) Śıkhara ın thıs sense ıs the subȷect of verses 65-74, ch XXXII of the 'Īsānasıvagurudevapaddhatı', Part IV Thıs Śıkhara or massıve dome-shaped roof ıs descrıbed as square or cırculaı, sıx or eıght sıded

I A

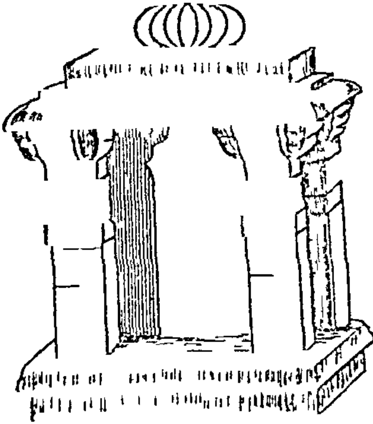


Fıg a * Lınga shrıne, Mahākūṭesvar, Type IA 1

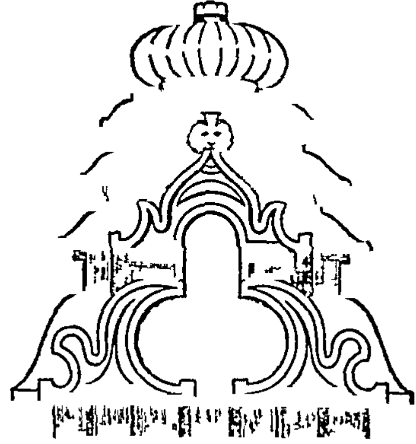


Fıg c * from Sārnāth, Type IA 2

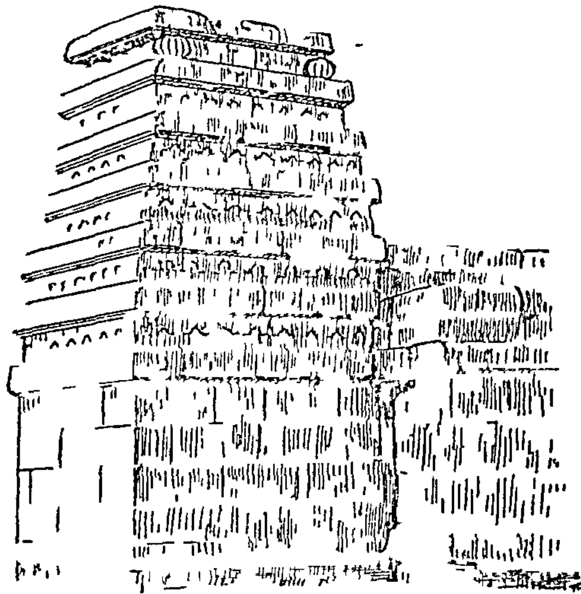


Fıg b * Temple No 10, Aıhole, combıned Type IA 1 and IB 1

* Drawn after H Cousens, 'The Chālukyan Archıtecture', ASI, vol XLII NIS, Pls XXVI and XIX

Sımılaı shrınes (Fıg b) at Mahākūta have a crownıng Āmalaka but are wıthout corner Āmalakas (ASI, Bombay Photographs, 1939-40, Nos 9554, 9555, 9558) and at Kurnool (Satvel, Rāmalıngesvarasvāmī Temple, 'South Indıan Epıgraphy', 1940-41, Photograph No 1973)

** Drawn after a relıef of the Gupta age, Coomaraswamy, 'Early Indıan Archıtecture', 'Eastern Art', III Fıg 59

Śikhara thus particularly denotes a shape curvilinear in the vertical section whether it is used to designate the whole superstructure of Northern Indian Prāsādas or the cupola of the High Temple only which is placed on top of the superstructure of South Indian Prāsādas This twofold use of the term Śikhara in Indian Vāstuśāstra has led to wrong interpretations Its square or round, etc , horizontal section on South Indian temples (Śiras-chanda, 'Mayamata', XVIII 1) has mistakenly been considered by modern scholars a criterion of the entire superstructure of a Hindu temple

Śikhara, however, is an ancient term of Indian architecture, it is used frequently both in the 'Rāmāyana' and in the 'Mahābhārata' when alluding to the Prāsāda in the shape of a mountain, like Kailāsa or Meru With its storeys it is itself like a mountain ('Rāmāyana', IV 33 8)[2] whatever its actual form might have been, of which there is no clear indication given in the Epics The Prāsāda, high and dazzling like Mount Kailāsa in the Himālayas and like Mount Meru which is known only by the mind, is the seat of divinity and the World Mountain, symbol of the polar axis, the vertical which leads from the Centre to the Highest Point While the whole temple is generally likened to the Mountain, the term Śikhara in early Vāstu-śāstra generally applies to every variation of the superstructure which rises from the perpendicular walls of the Prāsāda, and covers the Garbhagrha

Its pointed form is generally accepted and preserved in India from the fifth or sixth century A D to this day Various kinds, however, of high roofs of the Prāsāda exist, the apsidal temple with a barrel roof,[3] or a rectangular sanctuary with its superstructure crowned by a vaulted roof having a ridge,[4] neither of

[2] Some of the many later inscriptions which so describe it are given here "Om, a Prāsāda above Himavan ", Inscription of Meruvarman, ASIAR, 1902 3, p 213 Elsewhere, a stone temple is dedicated "resembling in lustre the mountain Mandara" (ASIAR, 1905 6, p 183)

The Khajuraho Inscr of the Vikrama year 1011 (A D 953-54) discovered amongst ruins at the base of the Laksmana temple, verse 42, extols "a charming, splendid home of Visnu which rivals the peaks of the mountains of snow" 'Ep Ind ' vol I p 121 f

In South Indian Vāstuśāstra the entire superstructure is discussed according to its number of 'storeys' (bhūmi) , it bears no special name

The passage of the I P given above, strictly refers to the shape of the massive dome of the *small High Temple* on top of the storeyed pyramid of a South Indian temple The other parts of the temple should be the same "yathārham tu yathāsobham" that as is fit and beautiful (*IP III* XXVIII, 42)

[3] This type appears to be an adaptation of the Buddhist Caitya hall The Kapoteśvara temple at Chezarla appears to have been such a Caitya hall converted for Śiva worship

The Vadamallīśvara Temple at Oragadam, near Mamallapuram, of the 10th century (ASIAR Southern Circle, 1914-15 ) has an apsidal superstructure above its Garbhagrha, from which it is closed off by a ceiling of teak wood rafters, concrete and plaster —The Hastiprstha type figures in Vāstu śāstra, from the temple called Kuñjara, in the list of the "20 temples" of the 'Brhat Samhitā'

[4] Bhīma Ratha at Mamallapuram, about 650 A D , the Navadevī shrine at Nagesvar, Almora (8th 9th century , ASIAR, 1928-29, Pl IV) , the Vaital Deul or Kapālinī Temple, Bhuvanesvar, Orissa, about 850 A D , the Teli-ka-Mandir, Gwalior, 11th century , the Vaital Deul represents a subvariety of the Khākharā type, also the Teli ka Mandir The 'Bhuvanapradipa', ch XCVII, (ed N K Bose, pp 171-73), distinguishes three varieties of the Khākharā type Drāvirā, Barabhī and Kosoli , these names appear to refer to an originally geographical distribution

these vaulted shapes with their horizontal sky-line express the ultimate aim of Hindu life, which is Moksa, release by reintegration These types, reminiscent of buildings as represented in Buddhist reliefs and also in some of the early paintings in Ajantā, were not destined to be generally accepted forms of the superstructure of the Hindu temple The keel vaulted shape became the typical top of the gate towers, the Gopuras, of temples in South India

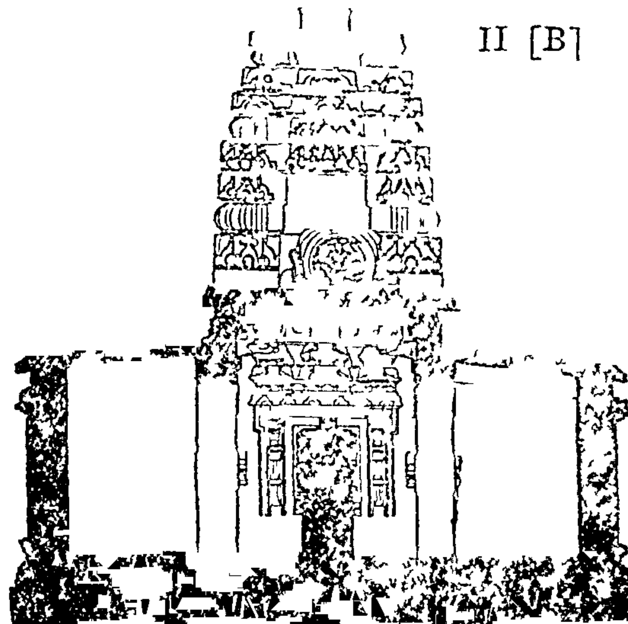



Fig d [5] Temple No 9, Aihole

Apart from these vaulted roofs there are several types of domes represented in the reliefs mentioned They belong to the huts of hermits, to chapels or to temples The Nāga or Fire chapel represented in one of the Sāñcī reliefs is supported on four posts and has a dome which shows a construction in sections In this and other examples, four or eight spherical triangles are joined with sharp edges It is seen in other reliefs that round domes were frequent over circular buildings [6] These various dome-shapes were transmuted, as extant examples show, from their leaf covered prototypes (parnakūta, parnasālā) and bamboo frame, into brick and stone, they form the solid dome-shape of the small High Temple which crowns the South Indian Prāsāda with its pyramidal superstructure

The pyramidal trunk itself of the superstructure has no prototype in the relief representations of Barhut and Sāñcī Only the dome of the High Temple, the small Vimāna (Figs e-h) resembles by its external shape the types of domed buildings represented in the early reliefs The High Temple however is not a building, it is a massive crown of the monument [7] As a rule the storeyed pyramidal super-

of the varieties of the Khākharā type, but similar to the names of the domes of Śikharas in South Indian temples they are used for the purpose of classification only Cf Pt VII, note 56

[5] From Cousens, 'The Chālukyan Architecture', Pl XVI

[6] Agni-grha ,-agāra ,-sālā ,-sarana denote a Fire chapel ('Rāmāyana', II 91, 11 , 99 12, etc ) Huts with domes in four sections are represented in Barhut (R P Chanda, 'Beginning of the Śikhara of the Nāgara Temples', Rūpam, 1924, Figs 1-3) , a circular temple with a round dome, the Sudhamma Devasabhā also in Barhut (ib fig 4) , cf Pt V, note 18

A building, having apparently an oval—or rectangular—plan and an oval (?) curvilinear tiled roof with a ridge, is represented in a relief of Stūpa II, Sāñcī , Marshall-Foucher, 'The Monuments of Sanchi', vol III Pl XC, 86a

The Nāga chapel is represented in the second panel on the interior face of the left jamb of the East Gate

[7] The non structural function of the diminutive High Temple is also to be seen on one

structure is nothing but a monument, it may be altogether solid, such internal space as it then may contain lessens its weight, is due to structural expediency and being unassessable from outside and, as a rule, inaccessible, has no architectural significance [8] This applies also to the curvilinear Śikhara

The superstructure of the Hindu Temple is not a high roof None of the roof forms represented in the early reliefs nor built to-day in rural India have been stretched or stilted in order to yield the height of the superstructure

The superstructure of the Hindu temple is a monument whose raison d'être is symbolical Where it is piled up in horizontal tiers, each similar to the other, their profiles owe their variety in different types of temples to several architectural constituents which in their original context have their main extension in the horizontal The horizontal courses and mouldings of the superstructure are adaptations of various structural forms The main tiers or storeys are called Bhūmi, they are the levels of the superstructure and of the spiritual ascent of the devotee [9]

The two main types of the superstructure of the fully evolved Hindu temple both have truncated bodies, their sides which are either straight or curved are terminated by a platform (skandha, the shoulder course) Above rests the crowning portion, (a miniature Vimāna or an Āmalaka) whence rises the final

The ascent towards the highest point, is given shape by a concourse of several components The pyramidal superstructure, in its generally accepted shape in South India for example, (Figs f-h), is composed of three main factors of which (1) the recessed tiers or storeys are the chief and supporting element, (2) above the last of these storeys rises the miniature Vimāna or Harmya, the High Temple, (3) each storey is surrounded by a rampart or enclosure composed of chapels In this its complete form, the pyramidal superstructure is an amalgam of several independent types of buildings Its form is complex, it is, however, not the only of its kind Contemporary with it are other forms of the pyramidal superstructure, though less rich in components

The evolution of the superstructure did not take place in one narrow channel Contributors to its form are many and so are their combinations but their conjunction is to one end, to lead from a broad base to a high central point, all the resources that lend themselves to this end are strung together and amalgamated Simple, aboriginal types for example are incorporated in the most evolved and complex monuments

One of the sites most helpful in gaining an understanding of several leading types of the superstructure is Mahākūtesvara (Makutesvara), near Bādāmī, Bijapur

of the small shrines of Aihole (No 11), Cousens, 'The Chālukvan Architecture', p 48, fig 13, it is placed above the flat tiers of the pyramidal superstructure The designation "High Temple" is made by analogy of the term "High Altar"

[8] See however the Vaikuntha Perumal Temple, in Conjeevaram (Pt V, note 89), or the Mahābodhi Temple in Bodh-gayā, which had a chamber opening from the second storey

[9] In some temples in Bhuvanesvar, Orissa, constructed after the tenth century and generally in temples of Northern India subsequent to the thirteenth century, no horizontal mouldings appear on the curvilinear Śikharas

The 'Bhuvanapradīpa' (N K Bose, 'Canons of Orissan Architecture', p 114) enumerates in the downward direction, the presiding divinities of a Śikhara of 10 Bhūmis

Dıstrıct, where many temples surround a tank ın whıch a small Lınga shrıne ıs built (Fıg a) The maın temple, that of Śıva Makutesvara, has gıven ıts name to the place and ıs mentıoned ın an ınscrıptıon dated 601 A D from whıch ıt appears

I B

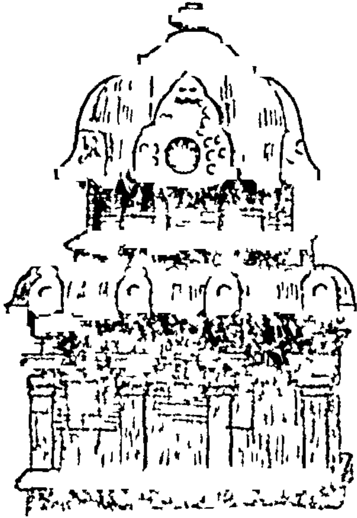
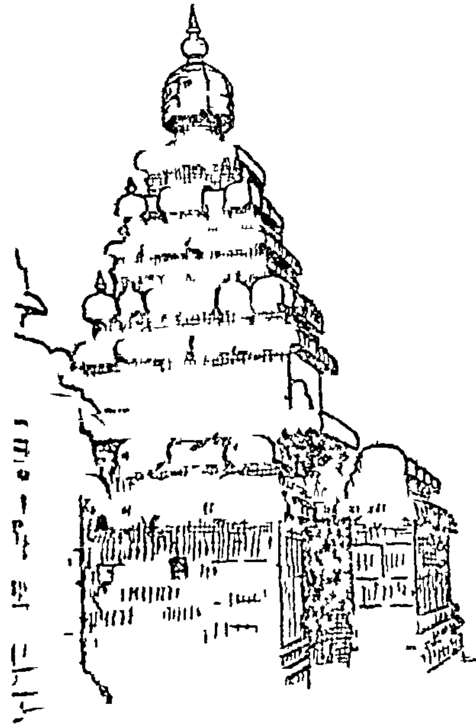


Fıg e * Śıva Temple at Enadı, Pudukottaı



g Shore Temple, Mamallapuram

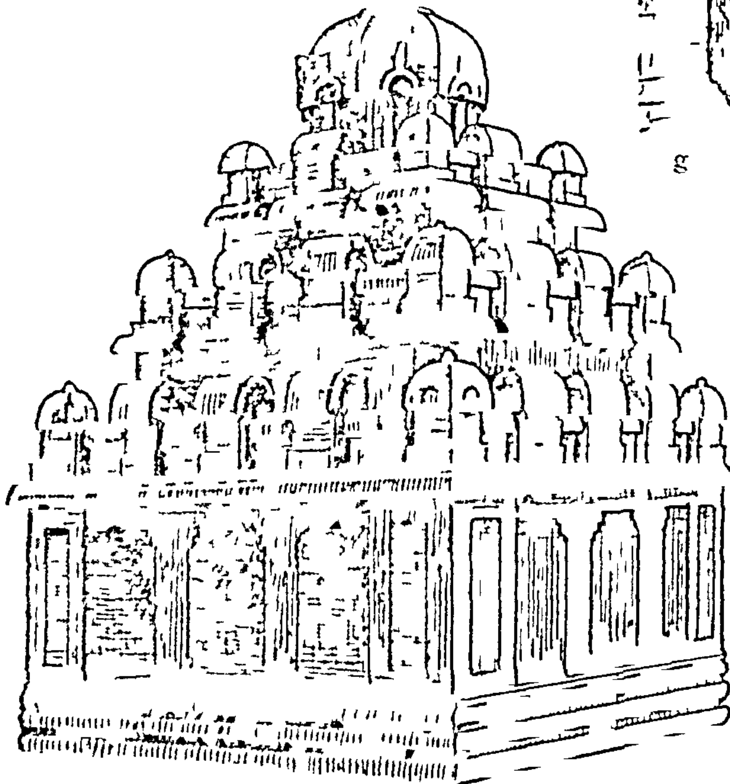


Fıg f Dharmarāja Ratha, Mamallapuram

* Drawn after JISOA, vol V, Pl XI Fınıal partly mıssıng , (lost, ın Fıg f)

to have been constructed in the third quarter of the sixth century. In its superstructure are combined all the factors mentioned above by which is distinguished the most complex type of its Southern form. Other temples of this site have pyramidal superstructures of a more simple type; others again have curvilinear Śikharas, fully evolved as far as their constituent factors are concerned.[10]

The temples at Mahākūṭeśvara having curvilinear Śikharas[11] may also be of the same or a slightly later date; they seem to correspond to the types of temples which are classified in the 'Bṛhat Saṃhitā' of the sixth century and the 'Matsya Purāṇa' which have doubtlessly Śikharas of the curvilinear type.

The Pāpanātha temple at Paṭṭadakal was built after 680 A.D. Here the curvilinear Śikhara is closely related to those of Aihole (Hucc...d) and Mahākūṭeśvara and appears to represent a more fully evolved type, the central buttress having its compositional theme perfected in a continuous pattern which forcibly sets it off against the lateral parts of the Śikhara. This is not so clearly evident on any of the other temples referred to and may indicate that they represent an earlier phase of the curvilinear Śikhara.

The importance of the site of Mahākūṭeśvara is supplemented by the early temples of Aihole, Bādāmi and Paṭṭadakal, all closely related historically, being the three successive capitals of the early Cālukya dynasty. In this small triangle of the Kanarese country from the fifth to the seventh century and later, the many shapes which were to remain the essential constituents of the superstructure of a Hindu temple to this day appear assembled and variously combined.

The following constitute the main contributions to the formation of the superstructure:

I. The principle of stratification in receding tiers. It has two main branches, the one (IA) having a flat or sloped roof, its cornice or eave, for its unit, and the other (IB) having a complete storey for its unit.

II. The shape of the 'Tabernacle', the primeval ... structure made of bended bamboos, branches, etc. It gives its curvilinear outline to the Śikhara. In its earliest appearance in preserved temples,[12] the horizontal courses of mouldings (IA), are embodied in its curved surfaces (Fig. a).

It is seen thus that type I in its form IA, is also merged in type II,[13] whereas type IB exists by itself throughout South India.

In type IB, the following are the main contributors:

(1) the central 'cube' in reality a low prism, of the walls, repeated in each storey, (2) the High Temple or miniature Vimāna, the neck and crown of the pyramid, (3) the enclosure or rampart of small shrines or chapels surrounding the

[10] The date corresponding to 601 A.D. is given in an inscription at Mahākūṭeśvara, H. Cousens, 'The Chālukyan Architecture', op. cit., p. 52. The temple of Mahākūṭeśvara with its rectilinear superstructure consisting of storeys is thereby definitely dated. See also note 57.

[11] Cousens, op. cit., Pl. XXVI.

Re the Pāpanātha Temple, see ib., p. 68, Pl. L.

[12] See Part V, notes 75 and 67. Fergusson, HIEA, I, p. 721 rightly remarked: "The style is complete and settled in all its parts. There was no hesitation then, nor has there been any since."

[13] See however note 9.

central walls and in some of the earlier South Indian temples sufficiently distant to allow for an air space between the central walls and the rampart of chapels (Figs f-g)

I B

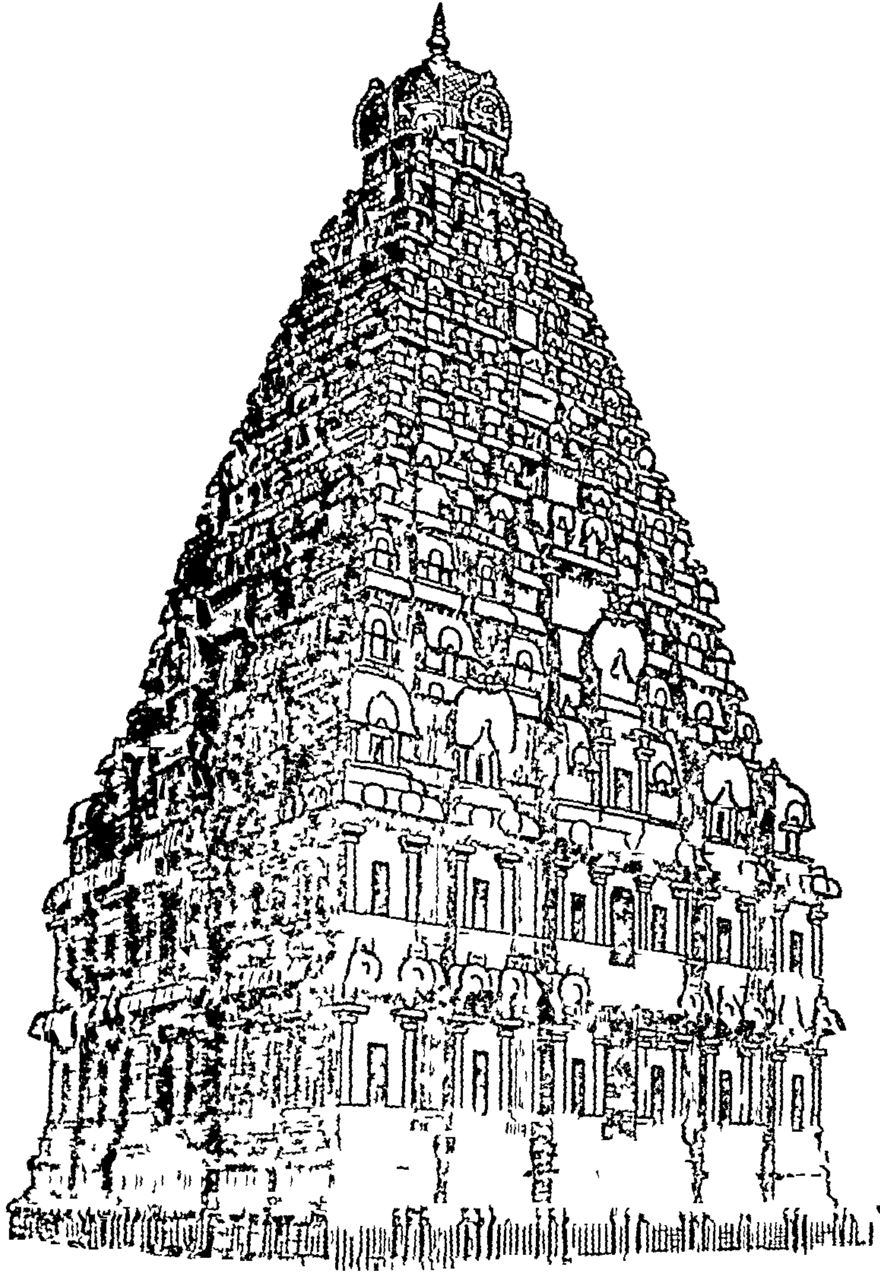


Fig h Brhadīśvara Temple, Tanjore

Type II has an Āmalaka for the crown of its high trunk It is a flattened shape, a cogged stone of which the circular horizontal sections are scalloped or lentil like, etc The scallops are generally convex (Pls I, II) and rarely concave (Pl XLV) Every curvilinear Śikhara on a square or circular base has an Āmalaka as its crown

The Āmalaka, however, crowns also type IA[14] (Figs a, c), its place furthermore, is also at the corners of a Bhūmi or 'storey' of type IB 1, and at each unit of several strata, of type II (Fig d) Whereas a 'storey' or Bhūmi of the type IB roughly corresponds, on a reduced scale to a storey in the usual sense and consisting here of the wall with its pillars, architrave (IB 1), and, in South Indian temples, a roll cornice, the latter representing the edge of the roof, its eaves, a storey or Bhūmi in types IA and II consists of eaves and recesses alternating or combined in several courses

The High Temple similarly is not confined to type I only A certain variety of the curvilinear Śikhara (II) rising from the rectangle of the temple walls, is crowned by a High Temple [15]

Type IB and type II are the most widely represented forms of the superstructure The curvilinear Śikhara (type II) is the general form of the superstructure—though not the only one—throughout Northern India as far south as the rivers Kistna and Tungabhadra Further south, in the Drāvida country, it ceases altogether The northernmost representative of type IB is the rock-cut Kailāsanātha temple in Elura

Type IB prevails in the Drāvida country and is well represented in the Kanarese districts of the Deccan In earlier centuries, from the 5th to the 8th approximately, type II also was frequent in the Kanarese districts (Fig d) but subsequently its occurrence is rare [16] Certain of its features were combined with type I and a new style was then evolved

Some of the main components are common to types IA and II Type IB shares with them many lesser particulars (Śukanāsā, and others) besides the main principle of their combination Type IA occurs sporadically in different parts of India This is also true of type IB where its component IB 1 is found forming a sub-variety in which this type of superstructure consists of a superposition of wall prisms or sanctuaries only, in receding storeys

The superstructure, type IB 1-3, however, is a composite monument in which have been coalesced various forms of buildings and their combinations

The curvilinear Śikhara, type II, is the most prolific, it is built over the largest part of India and is also a nucleus for innumerable variations of which the theme is always the shape of the Tabernacle Formed originally from the curves of vegetation, similar in their meeting at a point to the curves of a germinating plant, it throws forth part-forms of itself, parts of its own intrinsic shape, alike a living plant Its expanding, proliferating exuberance is, however, gathered and united in the point towards which its curves ascend

[14] Linga pavilion at Mahākūteśvara, etc Cf also the temples at Satrapada etc in Kathiawar

[15] This type has a rectangular and not a square plan (Pt VI, note 4) It is known as Khākharā, N K Bose, op cit, Pl preceding p 40 'Īśāna śivagurudeva paddhati', III ch XXIX 107 (kalara koṣṭhaka)

[16] The temple of Ganapati at Hangal, Dharwar, Cousens, op cit Pl LXXXVII Precursors and contributors of type I, on the other hand, are found also in Northern India, in the Panjab, in Bengal, etc (Pt V, note 80)

The single point towards which are raised its curved sides, is also the aim of type IB in which have congregated several forms of buildings and planning They have been absorbed by the discipline of its pyramidal shape The evolution of this type is not by proliferation but by increasing coalescence

In the various parts of India, in the course of roughly one millennium, many solutions were found and in part rejected The main components of the superstructure have been indicated, their places of origin in different traditions will now be traced However wide apart these may lie, the superstructure, together with the Prāsāda, in its fully evolved form is one consistent monument Seen from outside, the socle or base supports its perpendicular walls from which rises the superstructure and carries the crown of the temple, the High Temple or the Āmalaka, on which rests the finial Superposition of several units and their coherence in one solid monument is once again the principle of the superstructure itself, in its composition along the vertical

Structural forms of architecture such as the Tabernacle, the dome, and also the wall cube or prism of the 'dolmen temple', its cornice and other roof forms and their eaves are as much integrated in the monument of the superstructure as are also originally non-structural and purely symbolical forms of architecture of which the Āmalaka is the foremost The conjoining of these constituent parts, in various selections and their consolidation in well defined types have produced the multiform countenance of the superstructure

## IA THE PYRAMIDAL SUPERSTRUCTURE FORMED OF SLABS

### IA 1 The Stepped Trunk of the Pyramid

The superstructure is seen to enter the history of Indian architecture in one of its pristine modes in the water-pavilion at Mahākūtesvar (Fig a) On a flat roof slab, supported by 4 corner-pillars only, another smaller slab is placed and above it in the centre is an Āmalaka The slabs which thus cover the Linga pavilion in the tank called Visnu-puskarinī of Mahākūteśvar form the initial steps of the pyramid With them is associated the Āmalaka The Āmalaka here has the same appearance which distinguishes it as part of the capitals of rock-cut pillars in Western India of the 1st and 2nd centuries A D and as part of the shaft of Buddha-pillars carved in reliefs in Amarāvatī in South India [17] Where however it is part of the shaft of the pillar the latter appears to pass through it and to be clasped by its cogged rim [18] It is then a ring-stone, perforated On the pointed superstructures of the temples of India north of the Kistna, the Āmalaka is the support of the finial of the temple and is itself supported by the round shaft of the

[17] Coomaraswamy, HIIA, Fig 136, 'Elements of Buddhist Iconography', Pl I Figs 2, 3

[18] The Āmalaka functions as a ring in relief representations at Nagarjunakonda (ASIAR, 1935-36, Pl XXX c e) This Āmalaka ring is slipped over a composite symbol, which has the shape of a Makara on one side of the ring, and of a lion (simha) on the other

neck (grīvā, gala, kantha; see however also Fig. [illegible] where the Āmalaka is missing) which seems to emerge from the shoulder course (skandha), the uppermost course of the trunk of the Śikhara (Pl. I). This presupposes a central shaft (Parts V and VII) which having traversed the entire body of the Prāsāda would emerge above it, support, and be rivetted in, its crown, the Āmalaka. As a clasp and ring-stone, the Āmalaka would be a 'naturally perforated' stone alike in this respect to the 'svayamātṛṇṇās', the naturally perforated 'bricks' in the centre of the Fire Altar. There, they had been placed in vertical succession, the third and last of them upon the centre of the completed fifth, or uppermost layer of the Agni.

The superstructure of superimposed and diminishing slabs of stone forming a stepped pyramid surmounted by an Āmalaka is a pristine type of the superstructure of the temple. In decreasing size, slab upon slab are placed on the roof of dolmen type shrines in South India and the Himālayas as well.[19] In its stratification is repeated the horizontal theme of the base, where the walls of the Garbhagṛha are raised on the Adhiṣṭhāna.

## IA 2 THE STRAIGHT TRUNK WITH ROUND EDGED SLABS

The slabs, placed one on top of the other, have either straight vertical edges or the edges are moulded in the shape of a roll cornice or eaves. The lower slab of the Mahākūṭeśvar pavilion has a slightly rounded edge. Its curve is that of the eaves of a thatched roof in miniature. All the varieties of cornice mouldings of the horizontal courses of the superstructure have such eaves for their prototype. It was in this shape that the steps of the pyramid of the superstructure of the Prāsāda were to be perfected and to enter into new alliances in the centuries, the more austere form of right angles had less elasticity.

Two different building traditions contributed to the pyramidal superstructure whose stratified courses have rounded edges. The unarching shape belongs to stone prototypes. Slabs in diminishing size are placed on the flat roof slab of the dolmen type. Their added weight keeps the roof in position. It cannot be moved, the supernatural presence enshrined should by no means escape.[21] The slabs, being placed on top of the walls and on the flat roof, became assimilated to roof forms. They were given the shape of the curvilinear eaves of the thatch, cornice mouldings

[19] Whitehead, 'The Village Gods of South India', Pl. IX, [illegible] Nandī Maṇḍapas etc., in different parts of India, have frequently stepped pyramids of slabs for their roofs, for example the pavilion of the Vaitāl Deul, Bhuvaneśvar, Orissa, or the Nandī Maṇḍapam of the Viśvanātha temple in Khajuraho, another in [illegible], Bankura, Bengal, a representation of a corresponding temple shape on the [illegible] Copper Plate, Bengal, of the seventh century (S. K. Sarasvati, 'Temples of Bengal', JISOA, Vol. II, pp. [illegible]), pavilion of the Baijnath Temple, Kangra, 13th century, etc.

[20] Temples No. 10 (Fig. [illegible] b) and also No. 7, Aihole (Cousens, op. cit. Pl. XIX, XXI), combine the slab type (I A) with the storeyed superstructure I B, note [illegible].

[21] A similar explanation is given to this day at Bodh Gayā in reply to the question why the tombs of the Mahants near the temple are in the shape of stepped pyramids of considerable size.

of great antiquity and derived from its curves[22] were adapted to the relatively narrow slabs and formed their edges (Fig c) They softened the hard contour of the original stepped pyramid A seemingly unbroken outline results of the pyramidal trunk of the superstructure

The approximation of the horizontal courses of the superstructure to a particular roof form once having been achieved further varieties were adopted, in each particular instance however one kind only is chosen as the theme and repeated in the several tiers of the superstructure While the roll cornice moulding gained widest currency in the earlier temples, eaves with a double flexed curve subsequently became used in the same way [23] Their edge is frequently flattened out into a fillet and preserves the memory of the edge of the horizontal stone slab [24]

With the introduction of the curve of the eaves of the thatch into the straight edge of the horizontal components of the superstructure, gaps enter their layers and alternate with the variegated profiles of the horizontal mouldings These gaps are given different height and depth in the single superstructures, as a rule they are deep and narrow and their effect is that of dark bands of shade which cut into the mass of the superstructure without breaking its continuity Seen across the corners, air and space have entered its solid pile, alleviate it and enrich its slanting and curved profiles with shades, delicate or strong [25]

The superstructure develops with the logic of form destined for one purpose Into this monumental shape, roof forms spontaneously enter, eaves and slopes are adjusted to the levels of the massive pile Although a fully developed superstructure of the highest kind has not more than 16 Bhūmis,[26] each of these may contain

[22] The Kapota or roll cornice is frequently carved on the façades of rock cut Caitya halls, for instance at Karle Its outline is that of a quarter circle approximately (P Brown, 'Indian Architecture', Pl XIX Fig 2) This cornice, in structural buildings of stone, serves as a dripstone

[23] This is an extreme possibility to which the shape of the roll cornice lends itself, being an accentuation and protraction of its lower edge which is halted by a fillet This particular shape of the eaves appears to have been completely evolved in stone architecture and not in the thatched prototype, although in an initial stage the flexed curve belongs already to the dome of the Fire chapel in Sāñcī It occurs for instance in the 'Old Jaina temple' at Pattadakal (Cousens, 'The Chālukyan Architecture', Pl LIV, above the door of shrine and Mandapa, but not in the earlier Cālukyan temples, Virūpākṣa Temple at Paṭṭadakal, Pl XL, Malegitti Śivālava, Bādāmī, Pl XXIX) As can be seen in these buildings the end of the overhanging thatch when translated into stone looked abrupt, its form subsequently was softened, the one steep and heavy curve was given a gradual descent and its downward slope became upheld and balanced by a counter-movement This shape, moreover, was evolved simultaneously as a profile of the base of the temple, and is known in Vāstu sāstra as Padma or 'lotus petal' The roll cornice or Kapota retains its name in the various phases of transformation and it also becomes one of the profiles of the base, see Pl II, 'Essay on the Architecture of the Hindus' by Ram Raz, London, 1834

[24] Aihole, Temples 37 and 38, Cousens, op cit Pl XXV, the superstructure of the Pirhī Deul, i e the Maṇḍapa, of Orissan temples, from about the tenth century

[25] The 'Old Temple' at Visavada, Kathiawar (see p 155) is one of the most elegant solutions of this kind Together with the slope of the roof, dormer windows (gavāksa) have become part of each stratum of the superstructure The association of the superimposed slabs of stone and the roofs of houses is now complete

[26] i e the type 'Meru' according to the 'Br Samhitā', etc The Bhūmi, originally of one horizontal unit only, soon consists of two or three mouldings The third course is carved in

a number of roof-edge mouldings, six for example, the number remaining the same in all the Bhūmis, so that ninety-six similar horizontal profiles enliven its course. With such a number of superimposed roofs no actual building ever rose. Double and triple roofs are frequent in actual buildings, Vāstuśāstra knows of their employment as Dvicchādya, etc. ('Samarāṅgaṇasūtradhāra', XLIX, etc.). The house of God is other than the houses of men, their roofs are but mouldings and lines of its superstructure and designate its levels.

The pyramidal superstructure of diminishing horizontal slabs whose edges assumed the curves of *different roof* shapes is widely *distributed in India*, although not many temples with this kind of superstructure of the Prāsāda now exist. The

carved pattern formed by its layers of mouldings alternating with dark bands of shadow, was to be cast also on Type II of the superstructure, the Śikhara with curvilinear sides

The pyramidal superstructure composed of narrow horizontal tiers, originally various types of roof edges, cornices or eaves, has several further varieties [29]

## IB THE PYRAMIDAL SUPERSTRUCTURE COMPOSED OF STOREYS (BHŪMI)

### IB 1 THE STEPPED TRUNK OF THE PYRAMID FORMED OF SINGLE STOREYS

The other main variety of the pyramidal superstructure is divided into broad horizontal parts each of which represents a storey of a building This superstructure is a counterfeit of an edifice, it is set as a whole on top of the vertical walls of the Prāsāda Two varieties of this type are specially clear The one (IB 1) is represented by few preserved temples only like those of Bodh-gayā or at Sārnāth,[30] their gradually receding storeys have each a row of niches in relatively low relief against their compact walls The other architectural features, Gavākṣas, etc of this high superstructure are also carved in low relief and alternate in parallel courses with the rows of niches (cf Fig b)

The storeys recede imperceptibly, an Āmalaka moreover, is placed on each corner of each tier-like storey The composition of this high pyramidal mansion if visualized without any of its sculptural details, without the corner Āmalakas especially and by giving to its abbreviated storeys proportionately greater height, would resemble the stepped pyramid of the Sat Mahal Pāsāda in Polonnaruva, Ceylon, of the 12th Century No such type is preserved in India itself The stepped pyramid here, as also in type I A, appears to have been less frequently employed than the pyramid with a seemingly unbroken edge The latter type however is based on the stepped pyramid and this fact is never completely disguised This variety of the pyramidal superstructure (IB 1), shares with the more complex

[29] The pent-roof of laminated boards for instance, lends its slope to the superstructure of the temple at Gop, of Gupta age, in Kathiawar, and to the temples of Kashmir (Temples at Pandrethan, Payar, etc , 8th century)

[30] JISOA, VI Pl XXIV , Pl XXIII shows 'A Miniature Replica of the Mahābodhi Temple' (pp 78 f in an article by B Rowland Jr )

The conjectural restoration in the drawings on Pls XXXI and XXXII of P Brown's 'Indian Architecture' conveys roughly the disposition of the storeys On a smaller scale, and combined with alternating projecting tiers of the slab roof profile, are Temples 7 and 10 in Aihole The crowning part of these temples might have been an Āmalaka , as such it appears in the restoration of the Bodh-gayā temple , corner Āmalakas support the shoulder course of temple No 10, Aihole (Fig b)

In this superstructure the narrow courses with their cornices represent flat roofs above the broader courses representing a storey each whose walls have niches

variety (IB 1-3) the nucleus only, the superimposed wall-prisms in receding storeys[31] Carved with many niches and pilasters on each of the four sides it is an effigy of a storeyed mansion, placed on top of another large building with straight walls

The pyramidal superstructure with closely set receding tiers (IA) had its beginning in the strata of diminishing superimposed slabs The pyramidal superstructure with receding storeys on the other hand has its beginning in the superposition of a complete storey of the type described (Fig b) or of a much simpler type consisting of a cell only on top of another building with upright walls and having one floor only This can be seen in the cell put perpendicularly on the flat roof of the Gupta temple dedicated to Pārvatī in Nachna Kuthara, and also in the Kuraja Bir Temple near Jhansi which is of later date, similarly also the small shrine of Sūrya, is placed on top of the temple known as Lad Khan in Aihole These flat roofed cells, remotely of dolmen type, are actual sanctuaries with an interior space, they have not yet consolidated into the exterior only of a compact monument The principle, however, of piling one complete building, however simple, on top of another remains the same, in the artless combinations and in the compounded solidity of the storeyed, pyramidal superstructure

The Sat Mahal Pāsāda in Polonnaruva, Ceylon, is an authorised translation from stone into brick and an enlarged version of the dolmen type raised to the seventh storey on a stepped pyramid composed of similar shapes

## IB 2 The "High Temple" (Ksudra-alpa-vimāna)

Differing from such consolidated mansions are the superstructures of the temples in the Kanarese districts[32] and throughout that part of South India generally known as Drāvida There in the large temples (jāti vimāna, mukhya vimāna), an entire mansion of pyramidal appearance is placed on the vertical walls of the Garbhagrha (IB 1) Each storey of this pyramid however consists of the one central building plus a series of small buildings surrounding the walls of the

[31] The crown of the superstructure seems to have had the shape of the Āmalaka and in this respect it resembles type IA Intermediate types, like Temples 10, etc at Aihole (Fig b) show the drawing from one and the same reservoir of types Āmalakas occupy the corners, if not of each storey then at least of the highest layer below the top slab The Āmalaka, a broad and flat shape, on a high neck is shown also on the high pyramidal trunk of the shrines represented on clay seals from Nālandā, of about 1,000 A D (Gurudas Sarkar, 'Notes on the History of the Śikhara Temple', Figs 12, 14, "Rūpam", vol III)

[32] As far as preserved monuments go, these date from an earlier age than the structural and also the rock cut temples of South India, the Mahākūṭesvar Temple which was in existence before 601, was probably built in the third quarter of the sixth century, more ancient than the well preserved temples are the ruined Kont Gudi temple, and three others near it, in Aihole In South India, the rock cut temples at Mamallapuram are of the mid-seventh century and the earliest of the preserved structural stone temples were built subsequently, from the later part of the seventh century onwards

The temple of Mahākūtesvara has a rampart of chapels in the second storey, another rampart of chapels closely adheres to the third storey, the dome is stilted and has eight sections

central building (IB 3, Figs f-g) The small one-storeyed buildings, aligned in a row serve as a kind of parapet at a given distance from the walls of the main building with its pilasters and niches The small cottages, cells or chapels which are linked so as to form an enclosure wall or parapet of each single storey alternate in shape, they are square and capped by a dome or rectangular in plan and waggon vaulted, the former type, called Kūta, is invariably placed at the corners of the respective floor (bhūmi), its top has the appearance of a dome in four or eight sections (Figs f, g)

The small High Temple above the shoulder course (skandha) in which the superstructure culminates (IB 2) is reminiscent of the simple shrines represented in the reliefs of Barhut and Sāñcī Placed on top of the trunk of the pyramid, the walls of this High Temple form here the neck (grīvā) of the crowning dome, the 'Śikhara' [33] The 'walls' of this ultimate temple are alike in their position and function to the shaft (grīvā) by which is upheld the Āmalaka above the curvilinear Śikhara Here too, in the pyramidal superstructure of superimposed Bhūmis the shaft, be it round, square or octagonal, appears as if emerging from the Prāsāda, as if it were stuck across it from the base to the crown This visible part of the shaft in which is sheathed the vertical axis of the temple is formed here by the walls of the domed shrine

If the flat roofed cell was the simplest type of a building which had been piled along the vertical axis, and with its flat roof lending itself to repeated superimpositions, the small 'High Temple' or Vimāna with its dome is another type of building or temple which was raised on top of a flat roofed building A domed shrine, the prototype of the 'High Temple' of the South Indian temples is for example the Nāga or Fire chapel represented in one of the reliefs at Sāñcī (1st century B C ), Central India, aggrandised and consolidated in its architectural form is the rock-cut Draupadī Ratha at Mamallapuram (seventh century A D , South India), with its curvilinear roof in four sections it is another model of this type of one-storeyed temple It appears in relief representations—raised as a whole and placed on top of another prismatic flat-roofed sanctuary—and also in extant temples of Pallava and Cola age, in South India, such as the temple at Enadi (Fig e) [34] It exemplifies the "Small" South Indian temple (alpa-Prāsāda) and is without the rampart of

[33] The meaning of the dome is given by Coomaraswamy, 'Symbolism of the Dome', 'Indian Historical Quarterly', Vol XIV

The piling of one shape of temple upon the other as its superstructure is the subject of chapter LV of the 'Samarāṅganasūtradhāra' The superimposed temples may be square in plan or circular, etc their vertical sections also are different and each type has its name, such as Rucaka, etc "Rucaka or Vardhamāna or Śrīvatsa or Hamsa, whichever one may like among them, one should set up that on Garuda" (SS LV 79)

A small High temple is raised not on a pyramidal superstructure, but on a pyramidal substructure consisting of terraces, in Ahicchatra The single terraces have each a rampart , there are however no chapels and the open air ambulatory is between the central part or block of masonry on each terrace and the rampart of that terrace

[34] Pallava relief in Undavalli , A H Longhurst, 'Pallava Architecture', Mem A S I No 17 Pl XIII , in Mamallapuram, in the Gangāvatarana relief , Coomaraswamy, HIIA, Fig 198 , further elaborated temples of this kind are carved in relief in the gable ends of the Bhīma and Sahadeva Rathas in Mamallapuram Śiva temple at Enadi , 'Cola Temples in Pudukottai' by Venkataranga Raju, JISOA, vol V Pl XI

chapels The actual date of these developments is not ascertainable from the above examples About half a century earlier than the Pallava representations, the culminating chapel, with its dome, crowns some of the fully preserved temples of the Kanarese country, there it is not raised to the second storey only but to the third, fourth or fifth [35] In these temples too, another component, the rampart of chapels (IB 3), has been incorporated whose origin is still discernible in South Indian temples of the Pallava age and is dealt with below

The origins of the consolidated varieties of the superstructure are manifold, the dates of their entry and participation in its body are not known Their sequence must be reconstructed although architectural solutions which must have preceded derivatory forms are not infrequently preserved in actual buildings some centuries younger than the diverse and derivatory applications This is only partly due to accidents of preservation, but is itself a symptom of the course of history in India The original theme remains, either in its pristine or else in its highly evolved form, development is here tantamount to exposition A form giving the fullest exposition to the meaning it conveys may be contemporary with the nucleus of its meaning represented in elemental terms (Cola temple at Enadi, Fig c) on the one hand, and at Tanjore (Fig h) on the other or else is even outlived by the original, elemental form (for instance the fully evolved temples of the type of the Sangameśvara at Pattadakal, Bijapur District, of the early eighth century, and the above mentioned tenth century temple in Enadi in Pudukottai)

This happens irrespective of schools or regional developments as instanced by the above examples Every age, every province, every school and architect give their knowledge to the task of building the Hindu temple, the forms and their connections in which its meaning is inherent remain pregnant with it all the time, and some of them remain unchanged The flat roofed, one storeyed Pattaini Devī temple at Unchahara in central India, for example, has one monolith for its roof slab Its actual date is about the year 1000 A D, its form that of the 'flat roofed Gupta temples', the construction of its roof is megalithic But so is also that of the top of the many storeyed superstructure of the Great Temple at Tanjore, about 1000 A D (Fig h) It is a single block of granite, 25 feet square [36]

[35] Mahākūtesvar, 6th century, Malegetti Śivālaya, Bādāmī, 6th century, Temple of Sangamesvara, at Paṭṭadakal, 696-733 A D, half a century later, the Virūpākṣa Temple, and others at Paṭṭadakal, Cousens, op cit Earlier temples than these, though destroyed in the upper part, are in Aihole

[36] J M Somasundaram, 'The Great Temple at Tanjore', p o The author rightly calls the octagonal cupolic dome a Śikhara The 'Īśānaśivagurudevapaddhati', in Part III ch XXVIII 34-39, moreover defines the Kūṭa, Koṣṭha and Pañjara—these are the single miniature replicas of buildings, shrines or chapels, set along the edge of each of the 'storeys' of the South Indian temples—and discusses the shapes of their roofs (sikhara) which are vaulted or domed

K R Pisharoti, 'Śikhara', 'The Annamalai University Journal', vol V No 2, treats of the Śikhara, i e the superstructure of the Garbhagṛha, it may be called the 'head' of the Vimāna or Prāsāda, this is substantiated in Vāstu-śāstra which knows the temple as the concrete form and body of the Purusa (cf also Pt V, note 66)

The South Indian Śikhara supports the Śikhā, the final above the miniature 'High Temple', the 'ksudra alpa-Vimāna'

Śikhā is the skein of hair on the crown of the head, where lies the Brahmarandhra, the threshold of Brahman It is there that the last immanent breath leaves the body at the time

## IB 3 The Enclosure of Chapels

Different from such unchanged survivals in the body of temples themselves representative of different stages of evolution are certain other forms one of which, the rampart of chapels (IB 3), is of the greatest interest The rampart or wall made of single shrines or cells, even in the earliest preserved temples of Aihole, is a compact and diminished replica of its structural form (Kont Gudi Temple), it has become by the seventh Century the general pattern of the parapet on a flat roof (Pāpanāth Temple, Pattadakal, and contemporary rock cut representations in South India), its compact, contracted and abbreviated version points back to a distant past, when every single shrine in such an alignment had played its part in the total sanctuary or sacred precinct, enclosed by and, consisting of contiguous chapels Certain Pallava temples though of later date (700 A D ) represent an earlier stage in the history, nearer to the original function, of the enclosure made of chapels

In a fully evolved South Indian temple or Jāti Vimāna of about 1000 A D the high pyramid of the Bhūmis of the superstructure rests upon upright walls in which is encased the Garbhagṛha They are frequently given the appearance of two storeys, one perpendicularly above the other as in a vast building with many niches (ghanadvāra), flanked by pilasters in each storey and a heavy cornice moulding, the eaves, above each (Fig h ) Both these storeys occupy the same floor space and together they form the perpendicular walls on which is placed the pyramidal superstructure The storeys of the pyramidal superstructure are comparatively on a miniature scale but they too have their niches and pilasters In front of them, however, on each floor on all the four sides, is a series of small chapels or cells, oblong or square, and vaulted or domed, correspondingly (Figs f-h) These chapels are called Kūṭa and Koṣṭha, etc , placed close to the cornice of each storey they fill the gap between the receding tiers and give the outline of the superstructure the appearance of leading straight and unbroken from its base to its shoulder course

If an original building is imagined of which every single storey forms a large square hall (cf IB 1) and not a humble cell, and which, moreover, is surrounded by a number of closely set small buildings, all in a row and at a given distance from the main hall (Fig f) this would be the prototype of each single storey of the pyramidal superstructure prevalent in the larger temples of the Drāviḍa and Kanarese countries Little if anything has been preserved of earlier 'structures' thus laid out except descriptions by Fah Hian and by Hiuen Tsiang of Buddhist monasteries

Other Buddhist monasteries built of stone, consist solely of a row of cells forming a quadrangle, Buddhist sanctuaries made up similarly of a row of variously shaped chapels surrounding a Stūpa as the main sacred object in the court formed of chapels, have been preserved in Gandhāra, at Takht-i-Bahi, and also in

of death The 'Bṛhadīśvara Mahātmya' XV (Somasundaram op cit p 40), tells of the Brahmarandhra of the Great Temple at Tanjore which was closed by the huge monolith

[1] Fah Hian, quoted by Fergusson, HIEA, vol I p 171, the rock monastery having 500, 400, 300, 200 and 100 cells in the successive storeys respectively

The name for Buddhist monastery is Vihāra, Vihāra originally denotes sacred ground and seems to have been used in this sense, the cells marking its enclosure or limits

Jamalgarhi where the court is circular  Cut into the rock, the Buddhist monasteries in India show an alignment of single cells without architectural pretensions, along the sides of a square hall  This is the general arrangement of rock-cut Buddhist monasteries, from about the second century A D onwards

The plan of the rock-cut Buddhist monasteries in Ajantā, Nasik, etc , does not differ in principle from the stone built Buddhist monasteries in Gandhāra  These again conform, as in the Takht-i-Bahai establishment, with the santuary, 'the court of the Stūpa', with only that difference that there the single cells house images and that in the court is the main object of worship  Was it the organisation of monastic life which found a suitable type of dwelling and set up its sanctuaries in a similar manner? Or did the Buddhists adjust to their mode of worship and monastic life a form of religious architecture already in existence? The Gandhāra example represents an open air architecture , a row of cells surrounds a court, their alignment is at the same time its enclosing wall  A monument may be set up in the middle of the court, or not  This open air architecture is not suitable for the cold winters in Gandhāra and has not been evolved there either  The rock cut monasteries in India itself, with their central hall are identical in plan, retranslated into structural terms and set up in the open they would have consisted of a row of cells surrounding a central court [38] The Buddhists generally adjusted for their own purposes types of architecture already in existence

Though not preserved from an early age, the open-air or hypaethral temples[39] in existence consist for example of a row of single cells, each housing an image of one of the 64 Yoginis , the cells surround an open court, which is either empty or has its centre marked by a small pavilion

None of the preserved Cauñsath Yoginī temples is earlier than the ninth century A D , the one in Khajuraho in central India encloses a rectangular court, whereas at Bheraghat, the hypaethral Cauñsath Yoginī temple with its 81 chapels providing also for the images of subsidiary divinities and also the Cauñsath Yogini Temple at Rānipur Jhorial, in Patna State, forms a circular enclosure  In its centre is a small Chatra or pavilion on four pillars, an image of Śiva is enshrined in it , the images of the Yoginis, each in its chapel or cell of the enclosure, face towards it  The Bhimsen-ka Akhara in Dudahi, Jhansi, a circular cloister of 64 cells is without a central structure [40]

Another variety of the hypaethral temple belongs to Bengal  Two groups of 108 Śiva temples were built by the Burdwan Rāj about 150 years ago, one at Kalna, Burdwan, the other in Burdwan itself  The 108 chapels form the boundary of an

[38] The slow evolution of the rock-cut monastery from a hall without cells immediately attached to it, to a hall with a few irregular cells attached to it, to a hall with a few irregular cells opening into it on one side or the other, and to the final result described above does not go against the above assumption  The excavation of sanctuaries and solitary retreats preceded establishments of rock-cut monasteries on a large scale —The stūpa of Takht-i Bahai is not in the centre of the court, but lies on its N-S axis (ASIAR 1907-8, Pl L)

[39] "The village shrine in its most primitive type is always hypaethral or open to the sky", W Crooke, 'Religion and Folklore in Northern India', p 89

[40] B L Dhama, 'A Guide to Khajuraho', p 8 , R D Banerji, 'The Haihayas of Tripura', Mem ASI , ASR, vols XII p 128 , XVII p 64  ASI, U P Photographs, 1042 43 Nos 516-17 , 1937-38, Nos 6760-62

enclosure, circular at Kalna and rectangular in Burdwan They are built in the usual Bengal style The doors open into the court which has no other structure built within [41] Similar temples are also in Calcutta, they represent an ancient and perennial type of sacred architecture [42]

This type of open air temple appears to be the basic form of the Court of the Stūpa, at Takht-i-Bahai But it is also preserved in the surrounding wall of cells of some of the great temples set up by the Pallavas in South India, the Shore Temple at Mamallapuram (Fig g) and the Vaikuntha Perumal Temple being the youngest (710 A D ) Each of these large temples with its accessory buildings is surrounded by a wall of chapels [43] Apart from this enclosure of the whole precinct, another corresponding row of chapels surrounds the Prāsāda itself In the Shore Temple it has the form of a wall of cells separated from the body of the temple by an open air passage (Fig g) In the Kailāsanātha Temple however, another great structural temple of about 700 A D , at Conjeeveram, the single chapels of the enclosure, are attached to the walls of the Prāsāda from which they are seen to project, also in the rock-cut Kailāsanātha Temple in Elura—, whereas in the Vaikuntha Perumal Temple they are altogether embodied in the temple of which they form part of the outermost but covered ambulatory

These various solutions are stages in a process of drawing towards the Prāsāda the enclosure wall of the chapels and incorporating it Nearest amongst south Indian temples to the original open-air type is the Shore Temple The Prāsāda occupies the place of the Stūpa as in Takht-i-Bahai or of the central Śiva image in its pavilion, as in Rānipur Jhorial

The Garbhagṛha ensconced in these temples does not cover more floor space than a pavilion, but it was the purpose of the Prāsāda to be large and to reach to the clouds The Garbhagṛha by its nature is, and at all times remains, the small secret chamber By the same desire its secretedness became enhanced in the great temples and the floor space of the Prāsāda became enlarged by covering the circumambulatory According to Vāstu-śāstra, the temples covering a large floor space are Sāndhāra, which means they have an internal circumambulatory so that the Garbhagṛha has its walls encased in a second series of walls, this is the rule [44] Above the broader base thus gained for the vertical walls, the superstructure arises

[41] I am indebted for this information to Dr Jitendranath Banerjea

[42] Other hypaethral temples although without chapels as for example the Trimurti Kovil, Annamalai Hills, Koimbatur, with its circle of images facing inward, are backed by a low wall (Sir Walter Elliot, in 'Indian Antiquary', VII p 137) The sacredness of an enclosed courtyard, open to the sky and containing images is also familiar to the Jains in their 'Betta' Such enclosed courts with their images are cognate with the several enclosures (prākāra) and their images which surround South Indian temples (cf 'Vaikhānasāgama')

[43] They face the temple and, as in the Vaikuṇṭha Perumal Temple, form one continuous, pillared cloister, on the outside however, the wall is shaped in the likeness of a row formed of single cells, complete with their roofs

[44] Various examples of the internal circumambulatory date from the Gupta period, the temple at Gop, the Śiva temple at Bhumara, the Pārvatī temple at Nachna Kuthara, cf also the 'Bṛhat-Saṃhitā' and other texts

The Vaikuṇṭha Perumal Temple at Conjeeveram has two internal circumambulatories (Bhramantī or Ramanī, Andhakārikā, Andhārikā or Pradakṣiṇā, 'Samarāṅganasūtradhāra', LVII 114 548, etc ) on the ground floor

in its full volume. So there is the small sanctuary encased in its walls and having an inner enclosed circumambulatory or two even and, as in the Shore temple and the Vaikuntha Perumal an outer one, in addition in the open. Further, there is the enclosing wall composed of cells of the entire temple precinct. The rites of circumambulation and the rite of 'enclosing' the more than human presence have their architectural equivalent in the walls of the circumambulatory, to enclose the presence, and also the path around it, not only on the sides but also to cover its top, is logical for the central sanctuary, the Garbhagṛha itself, in principle, is closed on top like a dolmen.

While the Drāvida temples incorporate the theme of the hypaethral temple, the enclosure formed of chapels, in the body itself of the Prāsāda, the enclosure of cells around the main temple, belongs to some of the great shrines in distant parts of India, such as the Virūpākṣa temple in Pattadakal, or the Navalinga temple at Kukkanur (Gadag),[45] in the Kanarese country, the Kesava temple at Somanāthapur in Mysore,[46] and, in Kashmir, the Sun temple of Mārtānd and the Avantisvāmī temple in Avantipur.[47] Amongst Jain temples that of Vimala Shāh, A. D. 1031, on Mt. Abu, the Neminath Temple at Girnar, Kathiawar, or the Chaumukh Temple at Ranpur,[48] Jodhpur, built by Sūtradhāra Depaka in 1440 A. D. are cloistered by a range of cells, each a shrine with an image.

On the Malabar coast, a pillared cloister, the Nālambalam, a wooden structure, encloses the several buildings of which the temple consists.[49]

The hypaethral temple survived also in another shape. Instead of a contiguous range of chapels a number of separate temples may form an enclosure around a central shrine.[50]

In the 'South Indian' temples however of the Kanarese districts in the Deccan, and in the Drāvida country, the full range of the cloister built of chapels becomes incorporated in the body itself of the Prāsāda.

[45] Cousens, 'The Chālukyan Architecture', Pl. LII. The Navalinga temple is about three centuries younger than the Virūpākṣa temple.

[46] P. Brown, op. cit. Pl. CVII. The date of the temple is 1268 A. D.

[47] These temples were built in the eighth and ninth centuries A. D.

[48] ASIAR. 1907-8, Pl. LXXX.

[49] The temple of Thirunandikkara, of the 13th century. The temple of Vaikom, dated 1534 A. D., both in Travancore.

[50] Eight such subordinate temples surround the central temple in Sirpur, the four in the cardinal directions being larger than the rest (ASI. vol. VII, p. 175 f.); a composition of eight temples was the original form of the Śiva temple on Melamalai, Narttamalai, Pudukottai, of the ninth century (see plan, Part VII), and of the Nīlakaṇṭheśvara temple at Udayapur (ASI. ib. p. 82), etc. and of the Kothesvara Temple at Pathari of the ninth century. The rock-cut temple at Damnar (Rajputana) belongs to this group.

Further reduced in the number of the shrines forming the enclosure is the composition of temples called Pañcāyatana in which 4 separate shrines, each in a corner of the enclosure, surround the central shrine. This grouping is frequent in northern India and the Deccan; the following are some of the representative Pañcāyatana temples. Three different groups of Pañcāyatana temples (two of Hari-Hara, 8th-9th century, one of Sūrya of a later date) at Osian, Jodhpur, Rajputana; the Gondesvara Temple, at Sinnar (Nasik); at Khajuraho the temples of Visvanātha and of Lakṣmana (see Part VII), the Brahmeśvar Temple in Bhuvanesvar and at Mukhalinga (Ganjam), the Mukhalingesvara Temple.

The integration of the enclosing walls only of the ambulatory in the body of the Prāsāda, however, is also an all Indian development A temple having an internal Pradakṣina is called Sāndhāra In South India however the enclosing wall had a greater tenacity than elsewhere in the country, on account of the importance with which it was vested The principle of 'enclosing' is as strongly in force in the Vāstu-maṇḍala of the type Sthaṇḍila or Padmagarbha with its several rigid zones, as it is in the structural Prākāras or Āvaraṇas, the high walls which enclose a South Indian temple

The enclosure, be it a wall only or a contiguous series of cells, is an essential part of the South Indian temple in its fully evolved form Its delimiting function makes the sacred precinct a 'temple' and keeps alive the meaning of the Sakala plan in a Vāstumaṇḍala of many divisions These are observed in South India in their concentric rigour They are allotted to Brahmā in the centre, to the gods in the immediately surrounding zone, to men in a further zone and to the demons in the outermost rim Conforming in principle with this triple enclosure, are the seven enclosures of which the full iconography is given in the 'Vaikhānasāgama', etc The temple of Śrīrangam has indeed seven enclosures and if all the 'āvaraṇa devatās' are not to be found therein, they are magically assigned to them by the priest While other South Indian temples have a smaller number of Prākāras, the only Northern Indian temple in existence which has two enclosing walls is the temple of Jagannātha, in Puri, other Orissan shrines (Mukteśvar, Brahmeśvar in Bhuvaneśvar) have one surrounding wall and most of the North Indian temples are altogether without it, the walls of the main building themselves are its enclosure

The surrounding wall however belongs particularly to Drāviḍa temples Thus *the enclosure made of chapels too, kept its independent open-air existence while* it also came to function as an essential part in the large Pallava temples, the first structural temples built of stone, which were set up in the Drāviḍa country Finally, it becomes an adornment of the superstructure of the Prāsāda

This takes place not on one level only, but is repeated on the floors of the many-storeyed superstructure (Fig f) In receding tiers, a wall of cells forms the continuous parapet above which emerge the walls of the Garbhagṛha of that floor,[31] these again carry the parapet of the floor above An open air circumambulatory is thus provided for each respective floor, it is hidden from view by the parapet of cells (Fig f, also Fig g), this in addition to its ritual suggestiveness has monumental effectiveness for the recess of each upper storey, the step of the pyramid, is thus masked, the outline of the superstructure appears unbroken, and enriched by the bold three-dimensional discipline of the domed and vaulted chapel-shapes of its parapets or enclosures

The introduction of the row of chapels on each floor (bhūmi) of the superstructure fulfils a similar purpose in this larger conception as did the introduction of the curved (IA 2) eaves of the roof assimilated as they were to the slab type of the pyramidal superstructure (IA 1), and also the Āmalaka placed at the corners of its Bhūmis (IB 1)

[31] As in the Vaikuṇṭha Perumal temple An actual Garbhagṛha however on each floor is *not the rule, the structure of the South Indian temple as a rule has the appearance of a massive* monument, its interior, as a rule, is inaccessible to the devotee and not meant to be seen

Here, an entire type of planned architectural form is placed on top of its exactly similar but larger fundament, this procedure is repeated until the extent of the floor is reduced so that the accessory and surrounding buildings of the rampart can be accommodated no longer and only the central small building on the top, the High Temple, remains which is the crown of the monument (Fig g)

The theme of the pyramid as represented by the Vaikuntha Perumal temple comprises the entire Vimāna It is logically carried out from the bottom to the top In the wholeness of its conception this type of the temple, pyramidal in the vertical section, corresponds to the curvilinear type where the buttresses of the ground floor are extended and carried up all along the curved superstructure (Type II) The same constructural wholeness is seen here though with different units of form

These first structural temples of the Pallavas subsume ancient types of sacred architecture to a comprehensive conception of the Prāsāda The several original destinations and forms of their constituent parts can still be distinguished They are the central 'cube' or prism of walls, the rampart of chapels and the 'High Temple', the latter forming the crown of the temple

In later structural temples (Fig h) but also in earlier Pallava monuments (Fig f), preserved in rock cut examples, the entire pyramidal temple is placed as pyramidal superstructure on top of the prism or cube of the perpendicular walls of the ground floor (samsthāna) They encompass the (main) Garbhagrha of which the superstructure (IB 1-3) consists of storeys (bhūmi)

In the rock-cut Dharmarāja (Fig f) and Arjuna Rathas in Mamallapuram the total pyramid of this collective type of sanctuary is raised on the high perpendicular walls and pillars of the ground floor But not only in these rock-cut Pallava monuments is this type (IB 1-3) of the superstructure condensed into a monument without an internal space, in the structural temples of the Cola age and subsequently it is cut off from the interior of the Garbhagrha by the flat ceiling of the latter The Vaikuntha Perumal temple, however, with its Garbhagrhas in the centre of each of its four storeys, reveals the original purpose of accommodating a sanctuary in each storey of the pyramidal superstructure to the same extent as does the outer shell of this Prāsāda, from the ground level to its 'High Temple' [2] As a rule however and seen from the outside the consolidated trunk of the pyramidal superstructure simulates only a Garbhagrha in each of its storeys (Fig h)

The paradox is obvious in the history of this type of the superstructure of the temple The hypaethral temple with nothing in the centre or near to nothing is here amalgamated with a monumental structure in its centre It towers in each storey above its surrounding enclosure with its many small shrines

The existence of the Centre, however, whether marked or not, in the hypaethral temple had prompted its enclosure and the demarcation of its perimeter Not by chance is the number of the Yoginīs and their chapels 64 or, providing for accessory images, 81 They are related in number to the squares of the Vāstumandala The central position corresponding to the Brahmasthāna is marked, in Rānipur Jharial, by the central image in a pavilion, towards the Centre moreover face the chapels and the images of the Yoginīs in each of these hypaethral sanctuaries

The superstructure, produced by a transfer and elevation of the pyramidal

[2] Its section in perspective and ground plan are given by P Brown, op cit Pl LIV

temple, each of its storeys surrounded by an enclosure or rampart of chapels on the cube or prism of the supporting walls, does not result from a single operation, the paradox of the hypaethral temple, attaining its maximum height by means of a monument in its centre, however, is not the only one in the history of the pyramidal superstructure of South India

Further paradoxical developments accompany the evolution of this type of the superstructure The surrounding chapels, it has been pointed out of the ground floor of the Kailāsanātha Temple at Kāñcīpuram, were attached to the body of the building and drawn into the outer walls of the temple circumambulatory [53] Similarly, from the Cola age onward, the parapet of chapels on each floor of the superstructure is attached to its walls, the open air circumambulatory itself a vestigial part of the hypaethral temple, is pressed out of existence The enclosure of cells is now an embellishment of the wall of each Bhūmi, a sculptural part of the monument (Fig h) [54]

After the Cola age, moreover, in the course of time, a devolution approximates the total appearance of the central temple to one of its initial forms, such as is exemplified by type IB 2 consisting of the domed High Temple on top of the perpendicular walls of the Garbhagṛha

The fully evolved pyramidal superstructure having attained its perfect form and greatest height (190 feet) about the year 1000 A D in the Bṛhadīśvara, the 'Great Temple' in Tanjore (Fig h), loses it in the following periods in proportion to the increasing height of the gate towers, the Gopuras of its enclosure walls Taken as a whole, the South Indian temple irrespective of the flat roofs of its extensive pillared halls, in the centuries of its greatest expansion (Temple of Śrīrangam, 13th-18th century, the temple of Tiruvannamalai, Cola period and later) is a hypaethral temple, an open air sacred enclosure, with high walls, be they as many as seven, marked in the four directions by Gopuras whose height decreases towards the centre, where the main temple is marked by its position Its presence is inconspicuous, its diminutive superstructure barely noticeable as it emerges from the flat roof of a covered court With its many subservient buildings immersed in the air space and fenced off by repeated high walls and their Gopuras, the total South Indian temple town covers the ground marked in the four directions by the sequence of the Gopuras of successive walls, within the outermost enclosing wall The shrinkage of the superstructure of the centre, the diminution of the height of the main temple is a paradox of which the meaning is adjusted by relating it to the enclosure (parigha, prākāra) and its architectural form, the hypaethral temple Between the beginning and the end of this development lies the formation of the superstructure of the South Indian temple, a pyramid of many storeys each with its enclosing parapet of chapels and crowned by a small High Temple (Vimāna) [55]

[53] This temple and also the rock cut Kailāsanātha Temple in Elura are Sāndhāra Prāsādas, the circumambulatory intervening between the outer wall in which are 'embodied' the chapels, and the inner wall of the Garbhagṛha

[54] The Dharmarāja Ratha in Mamallapuram though but a small model of a temple, carved out of the rock, (total height 40') however provides a passage in each of the 3 storeys of its superstructure wide enough for walking around the central part of the monument (Fig f)

[55] The whole development outlined above was that of the large temples only The small shrines (alpa prāsāda) in South India remained in their constituent parts the same as they are

The devolution of the South Indian Prāsāda, the shrinkage of its height in comparison with the Gopuras, the gate towers of the surrounding walls, whose height increases with their distance from the temple in their centre, appears a paradoxical development, but it may be understood as a return to type Few representations and no structural examples of this type are preserved The representations are of an early age and from central and northern India, from Bharhut and Mathurā A high structure is seen there, it encloses and encases a small building which is the main temple The central sanctuary surrounded by structures larger than itself shows here the principle of the Garbhagrha extended to the building that holds it The small central temple with the image in the Garbhagrha is the Sanctum Sanctorum comparable in its position to the "Throne of Supreme Blessedness" [56]

This vision is akin to that of the city of Brahman ('Chāndogya Upanisad', VIII I I), wherein is a small centre, a dwelling, in which is a small space

carved in the Gangāvatarana relief in Mamallapuram (see note 34, Pt VI) and similar also to temples like the Śiva temple at Enadi The parapet of cells was not embodied in their form The main Garbhagrha below, and the shape of the High Temple above, were united through their proportionate measurement and sculptural elaboration

[56] Coomaraswamy, HIIA, Figs 42 and 70 Similarly also is the Āmalaka enclosed in a casket shape, on pillars in Bedsa, Karli and Nasik

## II THE CURVILINEAR SUPERSTRUCTURE (ŚIKHARA)

However manifold the varieties of the pyramidal superstructure proved to be, they do not attain in number, wealth and distinction, the range of the curvilinear Śikhara which belongs to the Hindu temple throughout four-fifths of India The river Kistna (Kṛṣṇa) is generally taken as the southern boundary of its extent Temples having curvilinear Śikharas however exist even south of the Kistna and as far as the Tungabhadra [57] Amongst the several types and stages of their development, two shapes are fundamental The one kind of Śikhara, (Fig d), except for the inward curve of its sides does not differ in detail from the pyramidal type of the superstructure (type IA 2) as represented in the Sūrya temple at Sūtrapada, for example Its horizontal courses have generally the profile of cornice mouldings, Gavākṣa 'windows' are carved on them In this type of Śikhara (Fig d) as well as in the corresponding pyramidal superstructure, an Āmalaka, indispensable as crown of the whole superstructure (Fig c), may also be placed at the four corners [58] There they were seen supporting the topmost course or slab of the superstructure (Temple No 10, Aihole, Fig b) This may represent an early stage of the employment of the Āmalaka on the trunk of the superstructure The Āmalakas are, however, repeated in most of the curvilinear Śikharas in regular intervals reinforcing the curved edge where they mark the Bhūmis, levels, or storeys [59] Each Bhūmi has several strata, first only two (Fig d), and subsequently an ever increasing number of horizontal layers (Pl LXXI), mouldings and recesses, the mouldings opening their Gavākṣa 'windows' as carved symbols (Fig d) in growing profusion until their rounded shapes are but the meshes of a patterned network which is cast over the Śikhara (Pl LXXI, etc )

On the earlier temples, from about the 6th century, the distinction between pyramidal and curvilinear superstructure of this type is one of degrees only The sides bulge but little (Temple IX, etc , Aihole) or else, on the temples of another provincial variety in its later phases (Lingarāj Temple, Bhuvanesvar, Orissa), the

[57] The curvilinear Śikhara, as illustrated in Figure d, is preserved with its Āmalaka intact, on two shrines at Mahākūṭa (ASI, Madras Photographs, 1938-39, Nos 1744, 1746) and also on two shrines belonging to the Rāmalingeśvara Temple at Kurnool (Satvel, 'South Indian Epigraphy', 1940 41, Photographs Nos 1972-75, 1942 43, Nos 2251-61), a number of temples having curvilinear Śikharas are in Alampur (Raichur), 'Annual Rep Arch Dept H E H The Nizam's Dominions', 1926 27, Pls II-IV, X f On some of the early Śikharas, the corner Āmalakas have their original rounded shape (relief of a Gupta Śikhara, Deogarh, ASI, U P Photographs, 1942 43, No 467)

[58] The Āmalaka crown corresponds to the Svayamātṛṇṇā stone on top of the fifth layer of the Vedic altar The Āmalaka at the 4 corners has its Vedic analogy in the four naturally perforated stones placed in the 4 directions of the High Altar according to the teaching of the Kaṭhās ('Āpastamba Śrauta Sūtra', XIX, 12, 16)

Technically however the Āmalaka is not a holed, but a solid stone and serves to lock together the sloping walls of the superstructure

[59] Cf also type IB I, the Mahābodhi temple

Śikhara has almost perpendicular, straight sides which curve in towards the shoulder course only of this truncated superstructure

From the beginning, the curvilinear Śikhara has one central projection in the shape of a broad offset, all along its height (Fig d) Where this superstructure appears on top of the walls of the square Garbhagrha, the walls themselves are similarly buttressed (Pl LXXI) The surfaces, in receding planes of the superstructure, are the vertical extensions of the theme of the perpendicular walls of the 'ground floor' As one unit, the entire Prāsāda steps forth on the four sides, the central buttresses or offsets frequently even exceed the sides of the Śikhara in height and are extended above its shoulder-course (skandha) into the region of the neck (grīvā) below the Āmalaka (Pls LXXI, XLIII, Fig 1, p 212)

The buttresses have their beginning at the foot of the wall of the temple, including the socle, the Adhisthāna The broad projection of the central buttress makes the ground plan of the Prāsāda cruciform (see ground plans, Pt VII) This is also the form of the central part of the Gārhapatya hearth where it results from the shape itself of the bricks (plan in Part VII) On the perpendicular walls of the temple, within the buttresses, in their niches or 'massive doors' (ghanadvāra), are placed as images the main aspects of the divinity in the temple (Pls LXXI, XLIII) Thus it appears to have stepped from within the Garbhagrha, through the massive walls of the temple and its 'solid doors' for an aspect of the deity has no physical body but it is given form and is bodied forth across the wall and itself is the door, by which the devotee in his heart and mind approaches the central divinity It is made manifest on the outside of the temple, with this exteriorisation, the Prāsāda wall itself, as it were, keeps pace, in the middle of its surface it steps forth in the shape of a buttress, a symbol of progressive manifestation in terms of architecture In the course of time the buttresses are increased in number and in depth Their structural significance is small, no stresses have to be counteracted for the whole monument, the Prāsāda, is built in horizontal courses which rest on their support in the vertical They do not exert any lateral thrust Trabeation and corbelling are employed in the Prāsāda and the Maṇḍapas for spanning spaces and constructing domes The buttresses could be dispensed with structurally but they are indispensably part of the form of the Prāsāda, the monument of manifestation of the Supreme Principle From the centre of the dark Garbhagrha, it shows forth in the architectural theme and in the images on the walls of the temple It leads from the bottom of the temple to its crown, the Āmalaka (Pl XLIII)

The buttresses do not form part of the flat roofed dolmen temple They can be thought of as having originated in brick structures corresponding to the augmentation of a central area, by adding bricks in the four directions as in the piling of Vedic altars (Figs in Part VII), not only but also in pillared buildings whose halls are made spacious by an analogous arrangement of the pillars When the buttresses make their appearance on the otherwise plain walls of the Garbhagrha, its roof is no longer flat but carries the superstructure, the Śikhara (Deogarh, etc )

The indispensable buttresses of the temple with the curvilinear Śikhara belong to its total form, they have their origin neither in the stone slabs of the dolmen nor in the Tabernacle of bended branches Brick laying, as in the Vedic altar, might have facilitated their employment and pillared halls with their regular inter-

columniations might also have preceded them  Such as they are they convey directly the meaning of the Prāsāda and are part of its monumental form

The other shape of the Śikhara has its perfect appearance in temples such as those in Khajuraho (Pls I, IV, Fig 1)  It surges towards the apex other smaller Śikharas cling to it in a massed competition of ascent  Although each of them has its edges marked by Bhūmis of many strata and by Āmalakas, these horizontal elements, like the nodules of the stem of a plant, do not break its rising lines  Their curves belong to forms of vegetation, the ribs of the large leaves of Banana plants, of palm trees or bamboo rods fixed in the corners of a square drawn on the ground and bent towards a central point, with their curves the stone built Śikharas of the Khajuraho temples arise and reiterate in their complex organisation the perennial meaning of the Tabernacle of the forest  It served and still serves the performance of worship (pūjā) and vows (vrata)  When these Pūjās and Vratas are completed, the leaves and branches which had formed the Tabernacle, having served their purpose, are thrown away, whereas the form of these temporary and humble structures was clothed in brick and stone and raised above the Garbhagrha, in the innumerable Śikharas known to exist from the Gupta age and which to this day compete towards the Highest Point

The Tabernacle of leaves, bamboo or branches is the prototype of the curvilinear Śikhara  The arch of vegetation, the arch of Nature surmounts and encloses the seat of God  In temple chariots with a framework of bamboo, as much as in the temples themselves, it is this 'Form of Nature', which remains one of the primeval and sempiternal forms of sacred architecture in India  It is the most sacred of all the forms of the superstructure, destined for the Prāsāda only  It is never placed as superstructure on any Mandapa or any accessory building of the temple proper  There the pyramidal types are accommodated, and at times assimilated to its curves, without however attaining to their unbroken ascent (Pl I)

The construction of the curvilinear Śikhara, by means of a division in geometrical progression—by four fold division (caturguna sūtra) in this instance—is given in the 'Hayaśīrsapañcarātra, XIII 324 f and 'Agnipurāna', XLII 15-17  This particular method which is indicated here, underlies the process by which the batter of the curved outline of this type of the Śikhara is determined  The 'Samarānganasūtradhāra' gives further information and the 'Brhacchilpaśāstra', with a recent commentary in Gujerati, is partly even more explicit

The 'Agnipurāna' passage speaks only of the four Sūtras, which are to be separately drawn—from the base of the Śikhara up to the other end, the Skandha,—for the 'purpose of the Śikhara' (sikharārtham hi sūtrāni catvāri vinipātayet)  These vertical parallels are intersected at certain regular intervals by horizontals (Figs on p 209 f), of which only one is given in the 'Agnipurāna' at the height where the Śukanāsā is to end  There a lion's figure should be carved  In the 'Agnipurāna', its position marks the middle of the Śikhara  A lion's figure, carved in the round juts out from above the 'Śukanāsā' of the temples in Orissa  The later texts make it clear that the shoulder course of the Śikhara is generally assigned 6 parts in width, the base of the Śikhara measuring 10 such parts ('Samarānganasūtradhāra', LVII 664 b, 'Brhacchilpaśāstra', III 81)  The height of the trunk of the Śikhara being given it should be divided by geometrical progression into a certain number of parts, three, four, five

or six according to the 'Samarāṅgaṇasūtradhāra'[59] A line parallel to the height is drawn from one end of the Skandha to the base of the Śikhara and one more parallel from the end of the base of the Śikhara The width of this rectangle is 2 parts and its height is equal to that of the trunk of the Śikhara (Figs on pp 209 f) Into as many parts as the height is to be divided—in a geometrical progression—into so many parts also is the narrow side of the rectangle divided The texts always speak of 'tri-guna, catur-guna', etc , 'sūtra' This, no doubt, implies that the division of the height should be in a geometrical progression (guna saṃkalita)[60]

From these indications, repeated in the description of practically every single variety of the Śikhara, (in Chapters LVI and LVII of S S ) it appears that the curve of the Śikhara is given by connecting the points of intersection of these lines

The total height has to be divided, for example, in geometrical progression into six parts (ṣaḍguna sūtra) The narrow side of the rectangle however has to be divided into six equal parts of its own The vertical parallels drawn through these points are equidistant They intersect the horizontal parallels which are drawn in a geometrical progression The curve is drawn through their points of intersection (Fig on p 210)

The method of drawing the curve was common knowledge and did not require an explanation A different curve resulted according to the number of divisions It sufficed if this number was stated, by controlling the lines according to a well known method,[62] the batter of the superstructure had to be made

[60] S S LVI 137 "Caturgunaiḥ pṛthaksūtraiḥ padmakośaṃ samālikhet", LVI 275 "Pṛthaksūtraistrigunitair venukośaṃ samālikhet" LVII 817 "Suṇṇaḥ pañcaguṇaṃ sūtraṃ rekhāntaṃ tatra vartayet" LVII 674 prescribes "ṣaḍguna sūtra", etc —These passages indicate that lines have to be drawn severally from three times to six times, dividing the height of the trunk of the Śikhara in a geometrical progression by three, four, five or six, while another set of lines of corresponding number and at equal distances is drawn parallel to the height within the rectangle described above The terms 'Venukośa', the "sheath of the reed", 'Sīmā', the boundary or width of the Prāsāda, are explained in Part VII

The curve is drawn through points of intersection of the horizontal and vertical lines

In drawing the curves of Śikharas as Figs on pp 209 10 show, based on an interpretation of the term 'guna' in the sense of 'guna saṃkalita' or geometrical progression, the writer has had this view confirmed by Mr E C Gentry, A R I B A , New Delhi

[61] The illustrator of the 'Bṛhacchilpaśāstra', III 78 94, attempts a division of the height into equal parts, with the result that the curvilinear outlines of the many varieties of Śikharas are identical in his constructions The curves moreover, are not drawn through the points of intersection

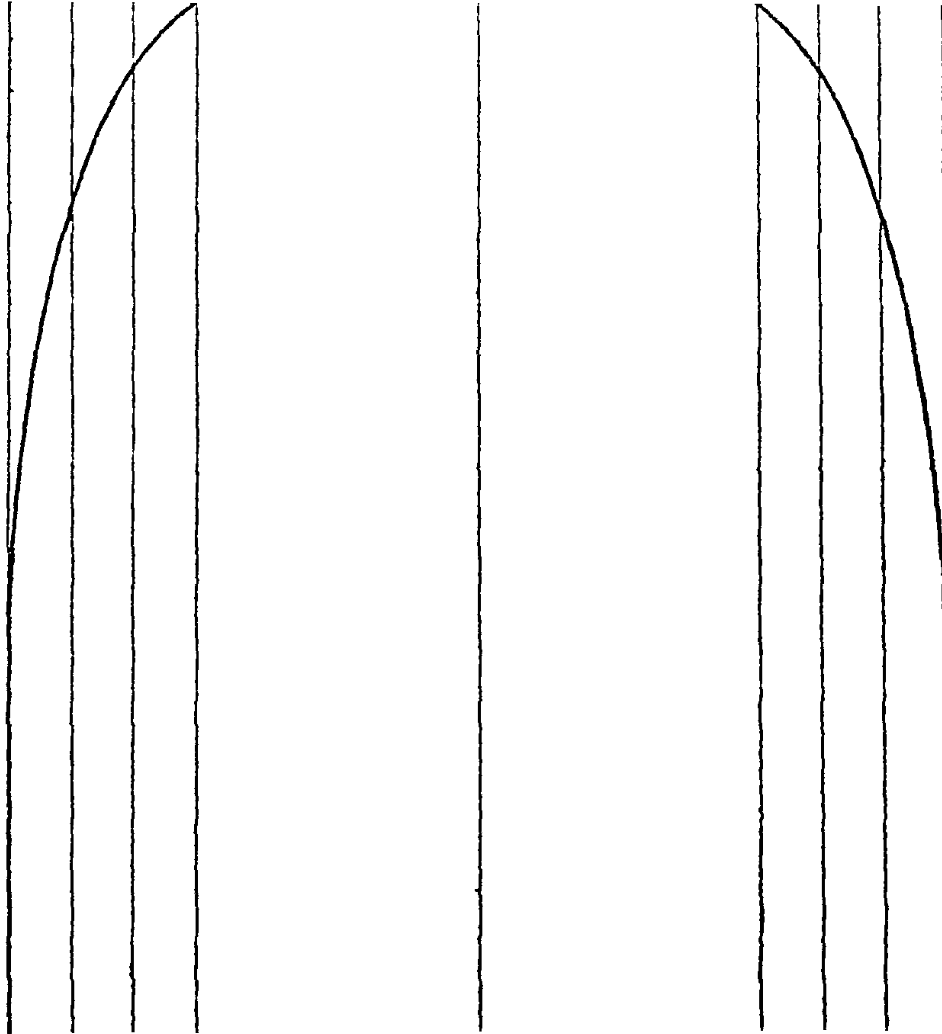
The figures denoting the batter in 'Canons of Orissan Architecture', p 111 f, and the accompanying drawing of the curvature of the 'gandi' do not appear to illustrate a mathematical rule Cf however the term "Rekhagunāghāta" (pp 114-5)

The methods practised by the ancients can be ascertained only by measuring the batter of the extant Śikharas and correlating these measurements with the formulae given in the Vāstu śāstras

Practising craftsmen (Dāmodar Mahārāna) in Bhuvaneswar determine the curve of the 'gandi', i e the trunk of the curvilinear Śikhara, "according to its beauty" They know no formula for its batter, they take however the width of the shoulder course as measuring ¾ of the base (and not 3/5, see p 207), and the width of the 'gala' as ½ of the Mūla sūtra, the height of the temple being twice, etc its width (cf Part VII), the perpendicular walls are assigned a height which is ¼th of the width

[62] "Rekhāvasena kartavyāh praveśāh" (S S LXV 18)

The Prāsādas as described in the 'Samarānganasūtradhāra', Chapters LVII, etc, with their curvilinear superstructures (Śikhara) are the most particularly Indian amongst the monumental shapes of the temple While cube, prism and pyramid belong to sacred architecture not only in India, the monumental shape of

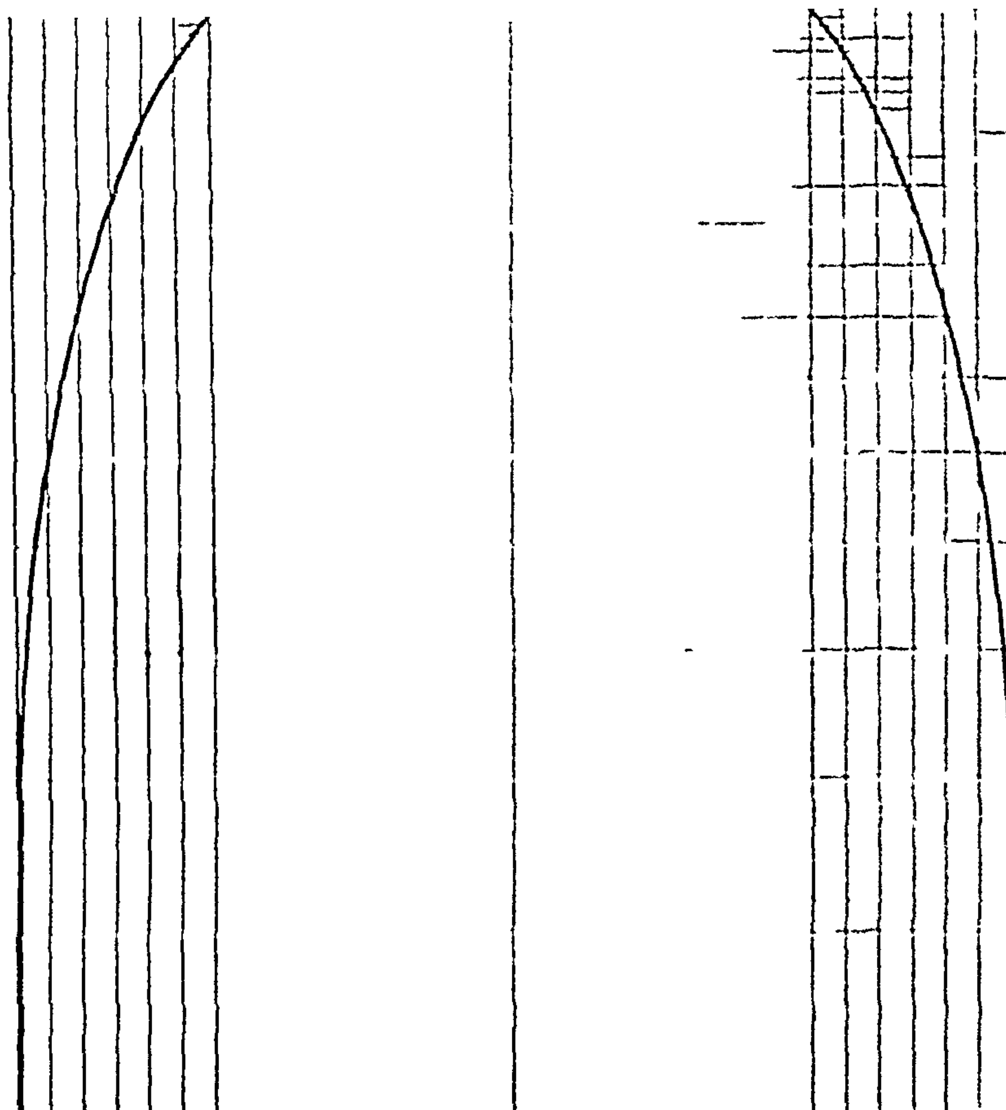


Curve of Śikhara drawn by means of 'triguna sūtra', the end of the rectangle being divided by three and the side by geometrical progression of three

the 'Tabernacle' originally of branches, etc, curving towards one point, is the pre-eminent shape of the Hindu temple It formed the nucleus of many developments, and has thrown forth multiple proliferations of its shape Rich in possi-

The word 'Vaśa' which means 'power' might be taken to refer to "the lines which constitute the sides of rectangles bearing a square-root relationship with their ends" Dynamic symmetry however does not seem to be implied in the indications quoted in note 60 See also the proportions and measures given in Part VII Scarcely any accurate measurements have as yet been made of extant Śikharas

bilities they have been elaborated and massed around the central dominant theme, accompanying its direction towards the highest point



The curve of the Śikhara drawn by means of 'ṣaḍguṇa sūtra' (division and geometrical progression by six) is more attenuated than those drawn by 3, 4 or 5 fold division

## THE MAIN VARIETIES OF THE CURVILINEAR SUPERSTRUCTURE

### IIA The Cluster of Śikharas

The extant temples having curvilinear Śikharas are distinguished by the following features The plan appears cruciform (see drawings in Part VII), this is the result of the central major projection of each side, generally called Bhadra, being flanked by more shallow lateral offsets, called Ratha If the temple has an ambulatory the Bhadras appear like transepts in the plan, the Talacchanda of the

Prāsāda is accentuated in the 4 directions, in which the temple seems to step forth from the straight inner walls of the Garbhagṛha The square of the Garbhagṛha is transmuted into the cross of the Prāsāda, the static centre of the temple is ensconced by its dynamically laid out perimeter The steps in the plan correspond to the buttresses or planes of the perpendicular wall of the Prāsāda They have no structural purpose and are the monumental form of the progression from the centre, they are carried up the Śikhara, and terminate at the shoulder-course (skandha), in certain temples as already pointed out, the main offsets of the Śikhara even exceed the Skandha and point towards the Āmalaka (Pls XLIII, XLV, Fig 1) [63] Above the Skandha, the Āmalaka, held aloft by the round neck, supports the finial

The Śikhara has two main shapes The one, IIA, consists of a central curvilinear Śikhara surrounded by clusters of similar Śikharas (Pls I IV, Fig 1) These are formed by one or several half Śikharas or Śṛṅgas leaning against the 'chest' (uras) of the main Śikhara and of each successive Uromañjarī At the corners, narrow and high quarter-Śikharas fill and round off the recesses between the Uromañjarīs and the main Śikhara (mūla-Śikhara or Mañjarī), while smaller part or three-quarter Sṛṅgas are grouped in the lower courses of the Śikhara each in continuation of a buttress or offset of the perpendicular wall of the Prāsāda The many variations of the theme of the Śikhara cluster are brought about by the number of Uromañjarīs of the Śikhara, the number of Rathas or offsets of the perpendicular wall and the number of horizontal rows in which are set the miniature Śikharas called Tilaka (sesamum seed) at the base of the main Śikhara, the Mūlamañjarī These factors depend on the specific proportions of the particular type of temple and also on its height and the curvature of the superstructure All the subsidiary Śikharas and other shapes are always subordinated to the main and dominant central Mūlamañjarī

Type IIA has the multiples of its own form set forth in the 4 directions, they ascend moreover from the corners, and each time to the same height as the respective Uromañjarīs, they are accompanied furthermore in this massed competition towards the apex, by lesser replicas at the base, attaining to smaller fractions of the height while they reinforce on their own, lower levels the urgency of the ascent Each of these multiple replicas has a 'neck' (grīvā), Āmalaka and finial of its own, while these terminate the single forms, they punctuate the striving of the entire mass of the superstructure towards the final point which lies beyond its trunk, whatever its height The single Śṛṅgas, as a rule, are spaced with increasing distances towards the top where is the single Bhūmis or horizontal courses of which each Śṛṅga is composed, decrease in height towards the summit of the Śikhara A counter-play of proportions results from this double progression, contracting on the upper register of the wall surfaces of each Śṛṅga and expanding with reference to the superstructure as a whole Its tension makes even more ostensibly coherent the substantiality of the monument whose texture thus is seen not as that of the stone or the bricks but appears to be composed of the acceleration and the halting of the ascent

[63] In this final and 'excessive' ascent the buttress quits the body of the building, while it is non structural throughout its end has the appearance, though not the function, of a flying buttress (Pls LXXI, XLIII)

Temples of this type are represented most perfectly in central India, especially in Khajuraho, in northern Gujarat, and also in Rajputana; the Rāja-Rānī temple in Bhuvanesvar, Orissa, belongs to this type according to the style of that country

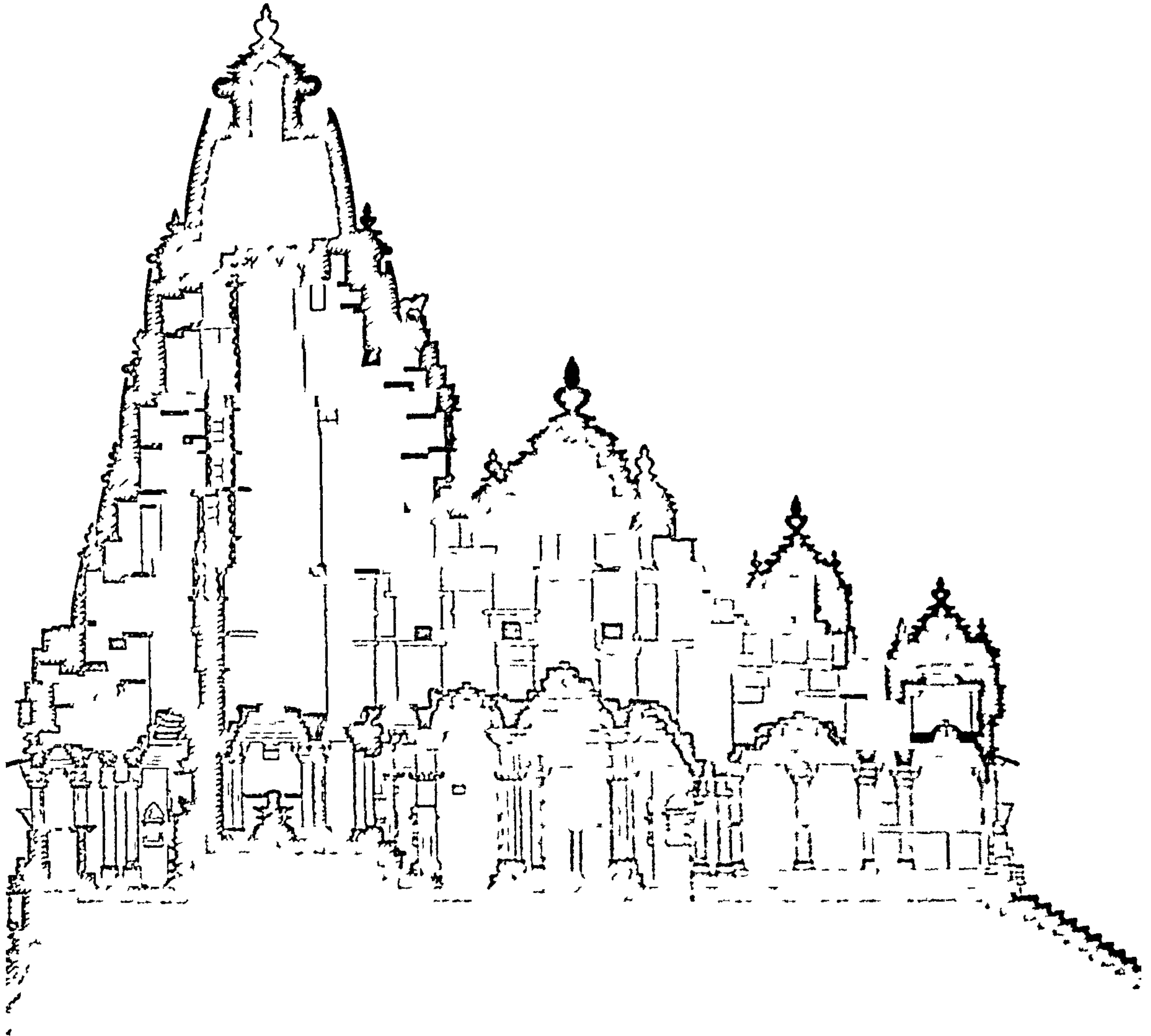


Fig. 1 Kandarīya Temple, Khajuraho
From B. L. Dhama, 'A Guide to Khajuraho', Pl. IV

The pillared halls which lead to, and surround, the Garbhagṛha occupy the ground floor (saṃsthāna) only. The vast superstructure is invisible from inside, where halls and Garbhagṛha are closed by trabeate domes of varying height. The main dome is over the centre of the [illegible]

In this zone across the width of northern India, however, none of the extant temples of this type is earlier than the tenth century This does not imply the relative lateness of the type, on the contrary, earlier less evolved temples of this type are no longer in existence [65] There ought to be Śikharas with but one set of Uromañjarīs instead of the usual two or four sets, the centre, the Mūlamañjarī, if imagined without the many flanking Śṛngas and Tilakas, corresponds to a complete curvilinear Śikhara in the shape in which it has not only the widest distribution but also the longest history (Type II[B]) Although relatively earlier Śikharas of this type (II[B]) are preserved—from c the sixth century, type IIA of which no earlier representatives than those of the tenth century exist, is the more pure of the two embodying in the main but one prototypal shape which is that of the Tabernacle of bent branches This shape was amplified by throwing forth multiples from its curvilinear walls, clinging to them like the petals of a bud about

hall (Mahāmaṇḍapa) The Garbhagṛha, though raised high above the level of the Mandapa, has its dome on a lower level than that of the central dome of the Mandapa

The Linga in the centre of the Garbhagṛha is straight below the finial and the middle of the Grīvā, if the shaft of the latter is imagined to traverse the whole Prāsāda

The interior of the superstructure is not meant to be seen , cf note 65

Seen from the outside, the superstructure three times rises and falls to an ever higher level , each of its peaks is above the centre of a hall , the long drawn out descent of the superstructure above the main hall is met by the steep vertical of the Śukanāsā, the antefix of the front of the Śikhara of the Prāsāda The Śukanāsā is above the Antarāla or porch of the Garbhagṛha (re Śukanāsā, see Part VII)

The steep slope of the back of the Prāsāda (W) is beset with Uromañjarīs Their Kalasas, and the high ends of the middle buttress of each, punctuate its curves

The perpendicular walls of the temple open up between rooflets and seats The latter with their sloped backs are shown in the sectional drawing , the seats rest on 'pillars which also traverse them

The temple rises from a high socle (adhiṣṭhāna) and has steps in the East Below the solid Adhiṣṭhāna is the broad terrace which supports the temples of Kandarīya, Mahādeva and Jagadambā Devī (Pl I)

[64] Jain Temple in Osian , Somesvara Temple in Kiradu, 12th century, etc The Mūlamañjarī or main Śikhara exceeds by 3/10 parts of the height of the Śikhara, the portion (7/10 parts of the height of the Śikhara) occupied by the Uromañjarīs ('Brhacchilpasāstra', III 80)

[65] The 'Four sided' temple of the 'Bṛhat Saṃhitā', LV, having 5 Andas appears to have had 4 Uromañjarīs massed around its Mūlamañjarī (see Part VII) The Śukanāsā of Type IIA, as a rule, has the outline of a triangular pediment and not of a Gavākṣa It is however filled by a network (jāla) of Gavākṣa tracery , Tilakas or Kūṭas in many cases add their small but solid shapes to this particular Śukanāsā (Pls I , LXXI) The topmost Gavākṣa, forming the apex of this pediment is an actual small window opening in the Śikhara of the Kandarīya temple The interior of this Śikhara (Fig 1) is divided into internal chambers bounded by large piers and having for their floor and ceiling transverse stone beams The single, dark, room like, corbelled cavities may be entered by an invisible opening above the Antarabhitti, the inner wall of the Prāsāda (see Part VII), whence the stalagmitic interior of the super structure may be traversed in all directions It served however no part of the cult and was not meant to be seen It is built on the principle of the horizontal tie-plate

In the temples of Orissa, there are four such horizontal courses only, those of the ceiling (garbha muda) and shoulder course (ratna muda) , between these are the Bahmuda and Lakhi muda , these are invisible from outside Below the Ratnamuda, a small rectangular window opening admits some air and light into the interior of the 'gandi', the trunk of the Śikhara

to open. Far from imitating forms of nature, such as volutes, stems, foliage or flowers, it was made in conformity with the energies active in producing those forms. Repeated in proportionate reductions, the Śrṅgas, together with the symbols carved on them, integrally belong to the whole Śikhara and with it lead towards the highest point of the temple. The Tabernacle of bamboo, leaves or bended branches translated into brick or stone was elaborated and amplified logically in accordance with the energies of form inherent in its pristine shape.

## II [B] The Śikhara Enmeshed in Gavākṣas

The curvilinear Śikhara II [B] described already in an earlier connection (Fig. d) has been seen on the temples of the Kanarese country, of the seventh century and prior to it. The same type prevails in Orissa from the eighth century and is also frequent in the Deccan[66], in Rajputana (Pl. LXXI), Central India and as far north as the Western Himalayas. Its surfaces, in continuation of the theme of the perpendicular walls of the Prāsāda, are made up in every instance of the central buttress and those at the corner; between these may be added two or four intermediate buttresses. The several buttresses appear as graded planes on the body of the Śikhara; they function each as a pattern unit. The theme of the corner buttresses of the Śikhara remains one and the same throughout the centuries and in all the countries. It can always be recognised as consisting of horizontal units, called Bhūmi, each of which represents the trunk of a miniature Śikhara with its Āmalaka. Such a miniature Śikhara may consist of one or two courses only below its Āmalaka as in Aihole (Fig. d), or it may comprise six courses, as on the Liṅgarāja temple in Bhuvanesvar. Each course represents the eaves of a roof. These miniature Śikharas are strung together to form the vertically extended corner-buttress, the edge of the total[67] Śikhara; according to the shape of the total Śikhara and the height at which a small Śikhara is placed, it will be curvilinear or it will appear straight (Pl. LXXI). The horizontal courses give solidity to the soaring movement of the superstructure.

The inner buttresses of each side show, according to the chronological sequence of the temples the single strata or cornices with their 'attic windows' either as separate motives or as increasingly connected amongst themselves by the 'gavākṣas' or attic windows forming a tracery which is cast like a net (jāla) over them, at first veiling two or three such strata only and finally covering the entire length of the Śikhara offset. The body of the Śikhara enmeshed in it, clasped as by a creeper (latā), shows by its lateral indentations only the strata themselves, the original roof-edges. Such 'overgrown' buttresses are therefore called Latinī, in Vāstu-śāstra. They are one with the tracery of the 'creeper', the Latā, that covers each of them. Its unit always remains the curvilinear Gavākṣa.[68]

[66] At Añjaneri near Nasik, Cousens, op. cit. Pl. LVIII (Temple No. 7).
[67] It is called Koṇaka-pāga in Orissa.
[68] Coomaraswamy, 'Early Indian Architecture III', in 'Eastern Art', vol. III, Figs. 57-78, shows various uses of the Gavākṣa motif and its repetition, sectioning and reductions in various

This, the most widely diffused type of the curvilinear Śikhara, is an amalgam of two constituent shapes The one, it has been shown already, was the nucleus of the type called IIA There it formed not only the root-Śikhara but also the model of all the multiple and lateral issues of this type The Tabernacle formed of branches curving towards the point in which they are gathered is its perennial prototype

The other constituent of Śikhara II[B] is the straight trunk of the superstructure in its pyramidal forms such as has been discussed in different stages and types (Figs a-c) Both the curvilinear Śikhara as also the pyramidal superstructure were built not only in the earlier centuries at one and the same place, in Mahākūta and Aihole or in Satvel, Kurnool, in the Deccan, but—by the side of each other—also in the Western Himalayas, in Dvarahat, Almora [69]

The close connection of type II[B] with IA 2 has been shown already The curvilinear form of this type II[B] however is not in any way derived from the pyramidal shape [70] It presupposes a curvilinear prototype, the Tabernacle of leaves, bamboo or branches The Bhūmis—indicated at the corners along the edge of the Śikhara—do not belong to the Tabernacle prototype

The curvilinear Śikhara II[B], its edges beset with several Bhūmis, each marked by an Āmalaka crowning the horizontal strata, and itself a miniature Śikhara, is a complex shape, in it the general shape of the Tabernacle comprises parts such as contributed also to the pyramidal trunk of type IA These are the strata whose contours were assimilated to roof shapes of current types of buildings Together with their windows they were combined and subordinated to the Āmalaka which gathers and crowns their shapes into one unit, one miniature Śikhara, strung together they are as many as the Prāsāda has Bhūmis in its superstructure The principle of repetition is seen here applied in the vertical, garlands of closely set miniature Śikharas rise on the arched edges of the Śikhara, type II[B]

This theme had also become incorporated in the Śikhara type IIA, there, however the web of Gavākṣas is subdued in its effect and altogether 'overshadowed' by the powerful proliferations of the Uromañjarīs on the sides of the major Śikharas where they form slabs and slices of masonry, compact petal shapes with minor volumes of miniature Śikharas, etc , filling the corners

Proliferation in the four or eight directions of space and on various levels is the generative principle of the Śikhara IIA Superimposition of repeated units,

Gavākṣa patterns , cf Part VIII Pl XLVI, etc —Gavākṣa defined as Gonetra or "Bull's eye" designates also the unit of the pattern of the Jālaka or perforated screen, etc , on South Indian temples Six varieties are described in the 'Śilparatna', XXIV 9 10 , 'Kāśyapaśilpa', XI

The Orissan variety of the Rekhā temple of the "Nāgara" class (see Part VII) would thus most perfectly be a Latinā temple This particular variety is not confined to Orissa only, but is also represented in Mayurbhañj, Bengal and Assam in local versions The 'Bṛhacchilpa śāstra' (Part III, ch XI 503), more concise than the 'Samarāṅganasūtradhāra' in this case, defines Latinā as 'Nāgara with one Śṛṅga' and in Part III ch V 71, assigns Latinā to Gauda and Kāmarūpa, i e to Bengal, and Assam, where this variety of the Rekhā temple had found general acceptance

[69] ASIAR, 1924-25, Pl III Temples of the Maniyan group

[70] See however, Coomaraswamy, HIIA, p 83

No amount of the compression of miniature straight shapes can produce a curve of the total shape

however, as especially seen in II[B] is not particular to the curvilinear Śikhara only. Stūpa shapes, for example, were similarly super-imposed in towering structures.[71] The vertical series of miniature Śikharas, indicative of Bhūmis or levels, is subsumed in type II[B] in the total Śikhara or Tabernacle. The series of small corner Śikharas is not only completely integrated in its curvilinear edge, they are proportionately part of its height, which they build up in an arithmetical progression, most frequently (S. S. LXIII).

The edge of the Tabernacle in extant stone temple II[B] is not however always beset with the symbolic-architectural detail of miniature Śikharas forming the Bhūmis. In some of the subsidiary shrines around the Lingarāja Temple in Bhuvanesvar, Orissa, the Śikhara with its offsets is otherwise without any complexities; in some of the later West Himālayan temples the one central buttress is flanked by lateral walls as plain as it is itself but for some widely spaced courses of narrow Āmalaka shapes which demarcate the Bhūmis. Such retrogressions in varying degrees towards the original shape of the Tabernacle, prove the leading importance of its total curvilinear shape and the accessory role filled by the various smaller devices all of which are either its replicas on a smaller scale or of parts of it.

The temples in which the ascent is continued in one theme from the walls of the Prāsāda to the shoulder course of the Śikhara are called Latinā in Vāstu Śāstra. The Latās or single offsets of the Śikhara each with its web of 'sunray windows' or Gavāksas carry the vertical movement steadily upwards. Its urge and also its assurance rest on the curved walls of the Śikhara. Between the several offsets are recessed chases (jalāntara); their shadows outline the verticality of this Śikhara while they also add tone and enliven the many horizontal mouldings which are carried in tiers across the facets and the recessed chases. Between these horizontal mouldings run narrow but deep, horizontal bands of shadows. With their dark lines they clasp the entire volume of the Śikhara. Over it is cast the trellis of point like openings of the Gavāksas; light and shade thus become part of the texture of this Śikhara.

This form of the curvilinear Śikhara has been particularly perfected in Orissa;[72] the coherence of its monumental shape is enriched by carvings; nowhere else in India are the walls of the temple as intimately connected with their sculptures. As the offsets project one from the other so also do their outermost planes show their carved patterns in more than one surface of interlaced scrolls; these fill the panels that form the background of the images of the gods. The temple here is a work of monumental sculpture of which the single carvings form the intricate

[71] Coomaraswamy, ib., Pl. XIX, Fig. 69A.
The convex curve of the Śikhara known from the sixth century onwards may be contrasted with the concave outline of South Indian gate towers or Gopuras of about 1700 A.D. The latter outline may be seen against those of the roofs of South Indian houses, especially on the Malabar Coast. Their bamboo frame is bent concavely.

[72] The various shapes which contributed to the Orissan temples have their models carved on the walls of the Lingarāja and Brahmesvara temples specially and also on the Citragupteśvara and other of the later temples in Orissa. The stringing of Śṛṅgas on some of the 'lesser' Latās or 'Pāgas', as they are called there (anuratha pāga), of the temple is a sign of an assimilation by this school of sequences of form which belong to the architecture of central and western India.

surface They are contiguous and unbroken by large openings such as those of windows, etc These, where present in Mandapas, are screened with sculptured compositions

The closed volume of an Orissan temple consists of the Prāsāda and its Mandapa, the former is the Rekhā or Bara Deul and the latter is the Pirhā Deul, its superstructure is pyramidal, it represents type IA In its fully evolved shape it is crowned by an Āmalaka above a Ghantā (bell-shape) The two shapes of the superstructure, the curvilinear Śikhara II[B] and the pyramidal Śikhara IA here conjointly, each by the side of the other, form the perfect shape of the Orissan temple, the lower Pirhā Deul being subordinated to the higher Bara Deul in proportionate measurement of which the width of the Prāsāda is the module [73] The balance of these two contrasted superstructures, a closely knit unity of Prāsāda or Bara Deul and Mandapa or Pirhā Deul, is peculiar to Orissa In the other provinces the superstructures of the Mandapas prepare and defer the climax of the Śikhara of the Prāsāda (Pl I)

Multiform and lending itself to the widest variations however is the clustered Śikhara (IIA) Its Uromañjarīs widen the base of the total superstructure It is thus specially suitable for Sāndhāra Prāsādas—having an inner ambulatory and projecting Bhadras or buttresses in the middle of the sides (Figs in Part VII) Bhadra, Śālā, and in addition also Catuskikā, an open pillared balcony, can thus be added one upon the other, leading to a further progression and extension of the cruciform plan, while in the vertical direction their digression is gathered up by the Uromañjarīs as they lean against the central body of the Mūlamañjarī The perpendicular walls are frequently broken by balconied openings in the cardinal directions and deep shadows cut into the body of the temple, while flat surfaces, instead of the mellow graded shades of the Orissan scroll work are a frequent accompaniment and background to the images on these temples [74] Altogether these temples are greater in the tension of their units, different in size and power and competing in the same direction, some acquire their full stature, however small, at a low level, while the high road along the central face of the innermost Śikhara is punctuated by the simultaneous rising of several forms of varied surge, to different heights

[73] Bara Deul and Pirhā Deul retain the completeness of their shapes, the former is without the connecting projection of the Śukanāsā, it is outlined against the sky in the integrity of its ascending curve, and is separated from the sloping outline of the Pirhā Deul by a deep incision In it the shapes of lions (simha) jump forth, the one from the 'Rekhā', the other from the Pirhā Deul, they form the sculptural link between Bara Deul and Pirhā Deul

In Rajputana, Osian, etc the Śikhara is closely related to the Orissa type The logic of form of the entire temple however is absent There, open pillared halls are an airy prelude but detract from the grandeur of the closed mass of an Orissan temple, however small its actual dimensions may be

In plan, the Orissan temples are more closely related to the scheme 'Prāsāda Kṣitibhūṣana' (Part VII) *than to the more richly differentiated shapes*

[74] The architectural contrast of dark expanses of shadow and flat wall surfaces in the light has its equivalent in paintings whose quality lies in the juxtaposition of coloured surfaces (cf 'A Painted Ceiling', JISOA, vol VII, Pl XVIII, at Madanpur, in Central India, and the Western school of Indian painting)

Here too, the Mandapa or Mandapas, each with a superstructure of its own, are fused with the Prāsāda in one plan, their separate superstructures indicating their number and original separateness (Fig 1, p 212) They are graded in their slow ascent towards the Mūlamañjarī of the Prāsāda The superstructures of the Mandapas, though they also as in Orissa belong to the pyramidal type (IA) are assimilated (Fig 1) to the curves of the Śikhara of the Prāsāda [5]

## IIC THE COMPOSITE ŚIKHARA

Composed of elements of both the 'overspun' (IIB) and the 'clustered' (IIA) varieties is a third (IIC) type of the Śikhara (Pl XLIII) Its central offset is carried on in continuation of the buttress of the perpendicular wall, the curve of this projection, covered with the web of ray-windows (gavākṣa), springs from the base of the Śukanāsī Kept in shape by these offsets on its four sides, the breadth of the segments of this Śikhara is set with horizontal rows of miniature Śikharas alternating with cubical 'Kūṭas', these demarcate the storeys of this least ingenuous, and composite, form of the curvilinear Śikhara (Pl XLV) It belongs to central India and the Deccan, there however the segments frequently are straight rather than curved faces and the four buttresses appear flung upwards like high, independent arches [6] On the central Indian temples however with the uniformly curved Śikhara, the horizontal rows of Śṛṅgas and Kūṭas, far from producing a storeyed effect, appear as so many gigantic beaded garlands thrown up towards the neck (grīvā) of the Śikhara The shadows in the vertical chases keep the single rows more deeply apart than the half shadows lingering over the slightly receding Kūṭas which alternate with the shapes rounded forth in broad light

The straightening of the curve of the Śikhara, in the Deccan temples, is an assimilation of the Śikhara to the preference in the more southern parts of India for the pyramidal shape, which is the leading shape of a South Indian temple This is not only a special feature of the 'composite' Śikhara (IIC) just described but also of the Śikhara (IIB) in the Deccan and can best be seen in the Pañcāyatana temple of Gondesvara at Sinnar

The third or 'composite' main variety of the curvilinear superstructure (IIC) is neither overspun by the web of Gavākṣas (IIB) nor is it shaped by a central

[5] To the Gujarat variety of this type of temple are added a Guḍha and Sabhā Maṇḍapa, the former closed, as the name implies and one in plan with the Prāsāda proper, in front of it the Sabhā Maṇḍapa is an open pillared hall which, as in the Sūrya temple at Modhera, is a separate structure

[6] Cousens, 'Mediaeval Temples of the Dakhan' op cit Plates, passim Essentially however there is no difference in type between a temple like the Nilakanthesvara at Udayapur of the 11th century (Gwalior, Pl XLIII) and the temple at Jhodga, Nasik (Cousens ib Pl LIII), although in plan the Udayapur temple is stellate, of the 'Bhūmija' variety (S S LXV), its buttresses and vertical rows of Śṛṅgas being placed on edge, and not parallel with the main buttresses Kūṭas flank also the central Latā, in Jhodga, a peculiarity due to its more 'southern' geographical position

[7] Cousens, ib Pls XLIII-XLIV

impulse and its proliferating activity (IIA) While it combines elements of both it loses the cogency of either form In principle, though not in quantity, type II[B] is its more powerful component

Highly flung central offsets overshoot the body of the Śikhara and reach up to the Āmalaka They terminate as a kind of flying buttresses, disembodied and carrying no weight On some temples, especially in the Deccan,[78] they secede from the body of the Śikhara not only at the top, the buttresses, in the four directions, project from the body of the Śikhara like gigantic ribs witnessing a process of disintegrating form, their curved shapes are reminiscent of the bended branches of the Tabernacle

[78] Ib Pls LXVIII, LXX, XCII

## FUNCTION AND FORM OF THE SUPERSTRUCTURE

The Tabernacle of the jungle was placed on the dolmen, or also embraced while surmounting it  The dolmen had been raised on a platform or altar  These forms of sacred architecture are conjoined in the vertical direction, their indissoluble sum total is the Vimāna in its most typical Indian form

The shapes of sacred architecture absorbed by the superstructure itself or subsumed to it are many  With them the image of the Mountain was given an indefinite number of variations  The purpose of the superstructure is always one and the same  It is to lead from a broad base to a single point where all lines converge  In it are gathered the multifarious movements, the figures and symbols which are their carriers, in the successive strata of the ascending pyramidal or curvilinear form of the superstructure  Integrated in its body they partake, each in its proper place, in the ascent which reduces their numbers and leads their diversity to the unity of the point

An exchange of forms within a community of symbols went on through the countries and centuries, an ever more explicit and detailed exposition was given to the meaning of the Prāsāda, increasing coalescence of the several symbolic shapes on each of the types safeguarded its monumental unity  The intricate carvings all over the surface of the later temples do not distract the attention from their one and only purpose (Pls I, XLIII, LXXI, etc )  In the strong light of the Indian day the profusion of plastic detail is absorbed into the texture of the monument  In its wealth its form is alive, it impregnates the carvings  In the most elaborate versions and their many combinations is the integrity of the original forms

They had been assembled from diverse origins  superposed slabs and various types of roofs whose more mellow and suggestive shapes the vertical edges of the former assumed, and also actual roofs arrayed in similar stratification  This latter type, as in Gop, Kathiawar, and in Kashmir, however did not lend itself to great development in stone or brick buildings, due to the meagreness, as a plastic form of the pent roof of laminated boards

Slabs in receding tiers are placed on the flat roof of the temples of village gods in the Tamil country and on Śiva shrines in the Himālayas  They help to hold the supernatural presence on the spot and correspond in this respect to the Sannirodhinī mudrā, the ritual hand gesture by which the presence of divinity is restrained and held at the place of worship, in the image in which it has its seat at that time  The slabs produced the trunk of a pyramid, stepped and gradually contracting into one steep ascent [79]

[79] With this have to be contrasted the layers of increasingly broad beams or slabs supported on posts, etc and placed in several strata above a sanctuary of the Bodhi tree temple, as represented in a relief from Mathurā, 2nd century B C (Coomaraswamy, HIIA, Fig 70) and the particular shape of capitals of Buddhist pillars, in which an Āmalaka forms the most important part (Part VIII)

Richer in motif than this type (IA), of the pyramidal superstructure, is the other (IB) in which a storeyed building, the centre of a hypaethral sanctuary on each of its levels, is crowned by a domed High Temple and raised as a whole on the walls of the Garbhagrha

As humble in its origin as is the series of slabs, whatever they originally might have consisted of, stone, or layers of bricks or less likely wooden planks, attaining height in the shape of a pyramid (IA),—is the curvilinear prototype of the Śikhara (II) The Tabernacle in the forest is one of the primeval forms of sacred architecture in India, as full of meaning in its curves as is the arch made of branches described in the "Āpastamba Śrauta Sūtra' under which, as under the rays of the Sun man returns from death to life (Part IV) The arch of vegetation gives its curve to sanctuaries set up for a definite Pūjā only, they are not meant to outlast the time of worship They have no permanence but are always put to the same use The large leaves of the banana fold into walls, or the temporary shrines are made of bamboo, etc , and withes As many of these shrines as are set up, so many perish, quicker even than they had been built they are dismantled after the Pūjā, they belong to a tradition which does not date and is living

The superstructure crowned by the Āmalaka or by the High Temple is the third and highest part of the 'body' of the monument, the Prāsāda,[80] the two other main parts of the temple being the solid base or socle, its altar, and the sanctuary with its vertical walls By its form the Prāsāda leads from the square at the base to the point above, by its exalted position and by its form, which leads to the peak, the superstructure is the Mountain, its mass is the vesture (kosa) in which is clad

[80] It is crowned by the High Temple or the Āmalaka, and exceeded by the Stūpikā or finial The latter is no longer part of its mass The finial, Cūla ('Agnipurāna', CIV 22) or Cūlaka (ib LXI 14, where the word is wrongly rendered as Vrkala, Cubuka or Calaka) is above the Āmalasāraka (which is above the Kantha and the latter above the Vedi) , above the Cūlaka—in a temple of Viṣṇu—is the Sudarsana Cakra, Visnu's disc (ib ) This is one of the few passages which mention the emblem of the god to whom the temple is consecrated and which is placed on top of the finial

The 'Samarānganasūtradhāra' enumerates in many passages the several parts of the finial, the Candrikā or Padmaśīrṣa, the Kalasa or Kumbha and on it the Bijapūraka, Bījasvara, etc (LVI 153-154 LVII 136, 425 , 719) No comprehensive name is however given to the whole finial

The 'Tantrasamuccava , I II 50, describes the finial, the Stūpikā, as consisting of a Padma, lotus , Kumbha, vessel and Kudmala, lotus bud, etc In an Alpaprāsāda, the height of the Stūpikā is ¼ of the Mānasūtra or width of the Vimāna, and is equal to the height of the Adhisthāna ('Īsānasivagurudevapaddhati', III ch XXX, see chart I, Part VII , also note 40, ib )

In a certain class of South Indian temples, i e the "small temples" (Alpa Prāsāda) ('Tantrasamuccaya', I II 52), the demarcation is conspicuous between the walls of the Prāsāda and the superstructure , it is brought about by an entablature (prastara) and a recessed part above it, the walls of the storey called Grīvā or Gala (neck), just as the shaft which emerges from the shoulder course of the superstructure and reaches up to the Āmalaka or forms the walls of the High Temple is a recess in proportion to the platform of the Vedi, the Skandha, and is therefore also called Grīvā (gala, etc ) Thus six parts of the Prāsāda are distinguished in the vertical direction—Adhisthāna, the socle (with or without Upapītha, the pedestal), Pāda (the pillar or height of the wall) Prastara, Gala, Śikhara, and Stūpi The adding of the superstructure (the High Temple) to the flat roofed lower temple is recorded in these divisions

the Axis of the temple This emerges, in its topmost portion only, as section of a mighty pillar, as the 'neck' (grīvā) of the temple, above the shoulder (skandha) of the superstructure The symbol of the Pillar of the Universe inheres in the picture of the World-mountain.[1] The World-mountain is its vesture, the offsets and buttresses of the Prāsāda are its folds They have their origin in the Prāsāda itself which is the monument of Manifestation They are boned forth in rhythmical progression from its centre and vertical axis, on every one of its levels (bhūmi)

This rhythmical progression from the centre is particularly elaborated in the plan of the temples having a curvilinear Śikhara Wherever the shape of the Tabernacle rests upon or encloses the walls of the cubical sanctum placed on the altar-like base, the three main components of the Hindu temple are joined in the vertical direction by the high flung arches of multiple buttresses and in one shape its sacred form (Pls LXXI, XLIII) On the temples with a pyramidal superstructure, the buttresses are but rudiments, flat and without gradation (Drawings, cf plan in Part VII), without the scope of numberless variations of shape in which they step forth from the centre of the Garbhagṛha and are joined below the Vimāna to the curvilinear Śikhara

The Prāsāda with a pyramidal superstructure upon the 'cube' or prism—of its walls on the other hand preserves the distinctiveness of the two shapes (Fig h) They cohere but do not coalesce In plan, the walls with their flat buttresses where are the niches for the images, show their straight outline broken only by shallow offsets at regular intervals (Drawings in Part VII), they do not jut out by being set off one against the other—as they do in temples having a curvilinear Śikhara—especially in the centre of each side whereby the walls of the square Garbhagṛha and of the Śikhara assume the shape of a cross, in the plan and

in any horizontal section The proliferating vitality by which the square of the Garbhagrha is commuted into the cross, or into the circle of the stellate shape (Pl XLIII) of the perimeter of the Prāsāda does not belong to the temple with the pyramidal superstructure

However diversified the components and attributes of the temple with the pyramidal superstructure may be, the 'Jāti-vimāna' remains in principle a pyramid upon a cube, at all phases of its history [83] The vertical section of its shape in all its variations has for its theme the square with the triangle above it It is a version of the symbol of total manifestation 'more geometrico' and of its reduction to unity [84] The 4 regions of space lie within the walls of the 'cube' of the Garbhagrha and the storeyed pyramid above it, the superstructure, leads to the unity of the point

[83] The pyramid above the cube is to this day the form of simple shrines in Benares (cf also R L Mitra, 'The Indo-Aryans', Vol II) Here the 'original' stereometrical, symbolic form outlived its diversified appearance in the great monuments such as those of Bodh-gayā, or the South Indian Vimānas of about 1000 A D

As a peculiar version of the Śikhara with Uromañjarīs, the temple of Sinaria (Monghyr, Bihar) deserves mention Applied in low relief to its pyramidal superstructure are triangular Uromañjarīs (ASI Bihar and Orissa photographs, 1936-7, No 4655)

[84] R Guénon, 'La Tetraktys et le Carre de Quatre', E T 1937, pp 140 145, treats of the quaternary as the number of universal manifestation Its significance is cosmological (the 4 cardinal points, etc ) whereas the significance of the ternary is ontological The unity is the first triangular number, it is also the first square number The second triangular number is 1+2=3 1 corresponds to the point of the triangle, 2, being produced by the polarisation of the unity, corresponds to the extremities of the base of the triangle

# VII

# PROPORTIONATE MEASUREMENT
AND
# VARIETIES OF THE TEMPLE

प्रमाणे स्थापिता देवाः पूजार्हाश्च भवन्ति हि ।

"When the gods are set up with correct proportions then they can be worshipped "

'Samarāṅgaṇasūtradhāra', XL 13½

पाचक कटुतीक्ष्णाद्यैरनुसाररसैर्यथा ॥

अन्वीक्ष्य विपचेत् तद्वत् स्थपति सर्वमाचरेत् ।

यदुक्तं यदनुक्तं च तत् समग्रमपि स्फुटम् ॥

"As a cook cooks after testing various suitable flavours, the piquant, the sharp, etc , so should also the architect observe everything, whether stated explicitly or not, all (that is required) is clear (to him) "

ib , LV 158b—159

# VII

# 1 ' PROPORTIONATE MEASUREMENT OF THE TEMPLE

## THE RHYTHMIC DISPOSITION OF THE GROUND PLAN AND OF THE VERTICAL SECTION

The process of drawing the initial square is described in the same way throughout the Vāstu-śāstras In the middle of the site the gnomon of a given length is fixed in the ground, attached to it is a string A circle is drawn with a radius twice the peg Where in the forenoon and the afternoon the shadow of the peg reaches the periphery of the circle, there lie the East and West points, the line which then is stretched between the two intersection points of the arcs, described from those two points, lies North to South With the East-West and the North-South lines ascertained, the square should be drawn [1] This cord or line is the Pramāna Sūtra It comprises the co-ordinates of the Prāsāda Outside, forming the perimeter of the temple, the circumscribing line, Paryanta-Sūtra, is stretched The Vamśa-Sūtra comprises the lines which divide the Paryanta Sūtra, they assign their place to the 'Pada'-divinities ('Kāmikāgama', XVIII, 5-7, 'Mayamata', VI 19-21) and to the buttresses of the walls [2] These three groups of lines determine the rhythmical disposition of the plan (talacchanda) of the temple

The threefold system of proportionate measure expressed by the Pramānasūtra, —originally the two main orthogonals of the square Prāsāda—, the Paryantasūtra, or its perimeter, and the Vamśasūtra, which gives the theme of the walls, is the rule of the ground plan of the Hindu temple in its most evolved types (Figs on pp 217, 250) and in its simplest form The simplest form would consist of four internal squares brought about by the two main co ordinates, the Brahmasthāna being congruous to the Garbhagrha If a border of equal squares is added, they are twelve in number and occupy the thickness of the walls In this plan there would be sixteen squares only, the Paryantasūtra would measure four times the length of a square on each side, and the Vamśasūtras would assign to the Devatās their

[1] See Part II, pp 30 f

[2] The 'Kāmikāgama', XVIII 6, and LV 117, makes it clear that the Paryanta Sūtra ends with 'Kuta, Kostha', etc, i e with the projections of that name, from the wall of the Prāsāda

The 'Kāśyapaśilpa' XXVIII 2, XXIX 2, 45, 60, etc, expresses all measurements in parts of the Mānasūtra (Pramānasūtra) and of the "space between the Vamśasūtras" dispensing with the Paryantasūtra Although this terminology belongs to South Indian texts its principles are applied in Vāstuśāstra as known to us from the 'Brhat Samhitā', etc, in the sixth century A D

places within the wall space of the temple This is in fact the ground plan of the first or general (sāmānya) norm, according to the 'Matsya Purāna', CCLXIX, 1-6 (Chart I)

Four kinds of proportionate measurement of the Prāsāda are given in the 'Matsya Purāna' In the first, the plan is divided into sixteen squares, the height of the wall is equal to its outer length, the body of the Prāsāda is a cube, its high superstructure is twice as high as the width (w) of the Prāsāda (also 'Garuda-purāna', I, XLVII) If the width of a square is 1 unit, the width of the Garbhagrha measures 2 such units, the width of the Prāsāda is 4, its height is 4 and that of its superstructure, the Śikhara, is 8

The division of the Pramānasūtra is 1 2 1 This is also observed in the 'Brhat Samhitā' (LV 11-16) [3] The adjustment of the Mandala of 64 squares to that of 16 squares has already been discussed (Part II, p 58), here, it seems to have been suggested by the simplicity of the shrine, its plain, thick walls, without buttresses, belong to small structural temples in central India of the Gupta Age [4]

A height of the Śikhara twice the width of the Prāsāda, and its total height thrice its width as in types I and III of the 'Matsyapurāna' are rare in preserved temples of any age [5] The 'Brhat Samhitā' on the other hand, and norms II and IV of the 'Matsyapurāna' show the total height of the temple is twice the width of the square of the Prāsāda The proportionate measurement of plan and elevation in the three dimensions of space, and the conformity in principle of the plan and the Vāstumandala, underlie the general rules or norms of the temples in Vāstuśāstra Their several sets are put together in Chart I On the unified system of proportion the elaborations and specific shapes are superimposed which distinguish each single variety of the temples These Laksanas or specific features are listed in Chart II

Referred to the Vāstupurusamandala the triple system of proportionate measurement pertains to (1) the co-ordinates of the Mandala (2) the perimeter of the Vāstu, and (3) to the border zone occupied by the 32 gods For this reason too, the Vāstupurusamandala is drawn on the ground on which the Prāsāda is to be built ('Īśānaśivagurudevapaddhati', III ch XXVII, 59-60) is the prototype in whose conformity the measure of the plan is meted out The drawing of that Mandala sets the mind of the architect in tune and he plans the temple and builds it guided by its disposition The drawing of the Mandala gives the 'pitch' according to which the ground plan (talacchanda) has its consistency When the great temples were built, after the ninth century and which still stand, the drawing of the Vāstupurusamandala had become an architectural rite without necessarily coinciding with the laying out of the ground plan of the Prāsāda

[3] Not all the measurements of the temple of the several types are detailed in each text The proportions of the 'Brhat Samhitā' being based on the square of 8, are nearest to the 'principles' of the temple, the 'Matsyapurāna' where it deals with architecture, sums up subsequent practice

[4] The Nemi, the outer circumambulatory, provides for the buttresses the Rathikās their projection (nirgama) is given in proportionate measurement in other types of the Prāsāda (see Chart I)

[5] Śikharas of this proportion or having even a greater height such as the Amrteśvara Temple at Singhanapur (Cousens, 'Mediaeval Temples of the Dakhan' Pl XCII) are rare In wooden temples this excessive height might have been normal

The three-fold proportions regulate the rhythmical disposition of the simple as well as of the most complex or evolved ground plan Different varieties of temples and their plans are described for example in chapter LVII of the 'Samarāngana-sūtradhāra' [6]

The plans, p 247 f, of the Prāsādas Ksitibhūsana, Vijayabhadra and Hemakūta are drawn according to the 'Samarānganasūtradhāra' [7] They belong to fully evolved structures, the one relatively simple in plan the others more elaborate, in which the original principles are worked out in their implications These three varieties of temples have each an ambulatory outside the wall of the Garbhagrha, it is enclosed by the outer wall of the temple [8] The name of the walled-in ambulatory is Andhakārikā, being a blind (andha),[9] in the sense of dark, ambulatory, the inner wall is called 'the wall' (bhitti) or inner wall (antarabhitti), or root-wall (kanda-bhitti), while the outer wall has only one name, (bāhya-bhitti), which means outer wall and shows that the inner wall is the original wall, by which the Garbhagrha is surrounded This augmented plan is also organised in three respects (1) along the orthogonals corresponding to the Pramānasūtra (2) along the outside of each of the two sets of walls or the Paryantasūtra and (3) along the Vinyāsasūtras and their extensions by which the projections and the vertical recesses of the wall are proportionately measured in their thickness or depth

The balconies and 'halls' (bhadra, sālā), that is the buttresses in the middle of each of the three sides of the Prāsāda which have the greatest projections (nirgama), the lesser offsets or buttresses (ratha, etc ), the vertical recessed chases (jalāntara, udakantara, etc which means 'drain'), the width of all these are shown in the plan on the Paryantasūtra and their proportionate thickness is measured on the Vinyāsasūtras [10] These are extended beyond the Ksetra This field is drawn

[6] *Actually 40 and 19 temples are described , in the other chapters of this most detailed* treatise on architecture, ground plans similarly organised are indicated or taken for granted The published text is not complete , after verse 210, ch LVII, 50 verses are said to be missing of the manuscript The prescriptions are not always fully given , this was not necessary as long as a living practice sustained the knowledge embodied in the text

[7] The drawing of the plan of the temple is explained on pp 247 f

[8] For early examples with Andhakārikā or Andhārikā, see chart "The 20 Temples" and also the Temple of Golaganāth, Paṭṭadakal, (Photo ASI, Western circle, 1909 10, No 3343), in addition to the temples already enumerated

[9] The synonyms are Bhramanī, etc see Part VI, note 44

[10] The measurement by these Sūtras or lines applies to the plan of the temple , the Māna sūtra however is the module not noly of its horizontal but also of its vertical proportions (Chart I)

A lesser module however is used for the 'accessory parts' (anga) Angas are, for example, the mouldings of the socle, the Adhisthāna Their recesses (pravesa) and projections (nirgama) are measured by Danda (or rod , 'Vaikhānasāgama', VI , see also Part I p 10) This injunction, recorded about the 8th century, is repeated in the 'Īsānasivagurudevapaddhati', IV ch XXXI 36 (quoting Parāsara) of the 9th-11th century and in the 'Śilparatna', XXI 10, of the late 16th century There it is said "all Angas of the Vimānas are measured by Danda The width (vipula) of the wall pillar (kudya stambha) at the top is called Danda" Later texts, it is shown below, apply the Danda measurement to pillars without any qualification or to the wall pillar (kudya stambha) or pilaster only

The Danda as module for measuring proportionately pillars, pilasters, mouldings, etc was used generally though not exclusively in South Indian Śāstras The 'Vaikhānasāgama' speaks of three possible ways of the proportionate measurement of pillars

first as square, as a rule, its rhythmical theme is given by the number of squares into which it is divided. In the 'Samarāṅgaṇasūtradhāra' the division is according to one or the other of the even numbers in the series of 10 to 28 as a rule. The figures on pp. 251, 47, 50 show a Kṣetra divided on each side into 12, 26 and 28 parts respectively.

The name for ground plan is Talacchanda, or rhythm of the floor; it is also designated as Saṃsthāna, though this term includes the vertical section of the ground-floor as well (S.S. ch. XLIX), its proportion (māna) and the assignment of the parts (talanyāsa) to their positions.

The plan of the Temple of Ambarnātha (p. 230A)[11] in the Konkan, Bombay Presidency, built in A.D. 1060, shows, to the left, the Prāsāda with its (nearly) square Garbhagṛha and thick wall. It has no inner ambulatory and only one set of walls. The theme of its projections consists in one central Sālā on each side as broad as the interior of the Garbhagṛha, and having a further offset narrower by one third approximately. The lateral bays (pratyaṅga) of the main buttress have 3 offsets on each of their two sides. A stepped and facetted wall of this Nirandhāra Prāsāda or 'temple without ambulatory' results from this simple plan with the Garbhagṛha a square of 3, the Prāsāda covering an area of 5 such units square and the furthermost projection of the wall extending to a distance of 3 such units from the Garbhagṛha so that the square of three occupies the centre of a 'cruciform' plan measuring nine such units across its arms.

(1) by Daṇḍa; in this connection it is stated that, at the top of the Pāda (pillar, i.e. its shaft) the parts called Potikā, Vīrakaṇṭha and Phalakā should measure 1 or [illegible] height.

(2) It is said of the pillar (above the Adhiṣṭhāna) that its Vedikā (lower part or base) should have a height 1/6, 1/7, 1/8 or 1/9 of the height of the pillar (pāda) from top to bottom. The width of the Pāda should be 1/7, 1/8, 1/9 or 1/10 of its height.

In this method of measuring, the height itself of the pillar is the unit of measurement. The height of the pillar (pāda=jaṅghā, see Chart I) however is given with reference to the Mānasūtra.

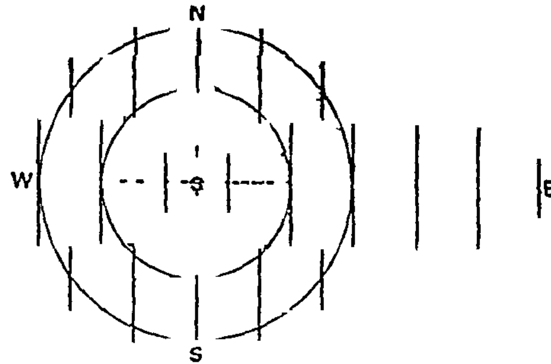
(3) It is also said that the width of the pillar ([illegible])—at the top—has as many Aṅgulas as the Vimāna or Mānasūtra has Hastas (i.e. the width of the pillar would thus be 1/24 of the Mānasūtra or width of the temple (vimāna)). Later South Indian Śāstras connect or combine the possibilities (1) and (2) of the 'Vaikhānasāgama'. Their differences are referable possibly to wooden pillars on the one hand and pilasters of the timber or masonry wall on the other.

The 'Mayamata', XV. 28, and the 'Kāśyapaśilpa', XI. 15, speak of the pillar (pāda) without qualification and not of the wall pillar (kuḍyastambha) only, whereas the 'Kāśyapaśilpa', VIII. 49, says that the width of the pillar (dārupāda) at its base should be 1/7, 1/8, 1/9, 1/11 or 1/12 of its height. Similarly also the 'Tantrasamuccaya', I. II. 10 where 1/8, 1/9 or 1/10 of the height of the wooden pillar (dārustambha) are given as the width at the base. The width of these pillars at the top is 7/8, 8/9 or 9/10 of the width of the respective base. The width of the Kuḍya Stambha here is given as 1/2, 2/3 or 3/4 of that of the Dārustambha.

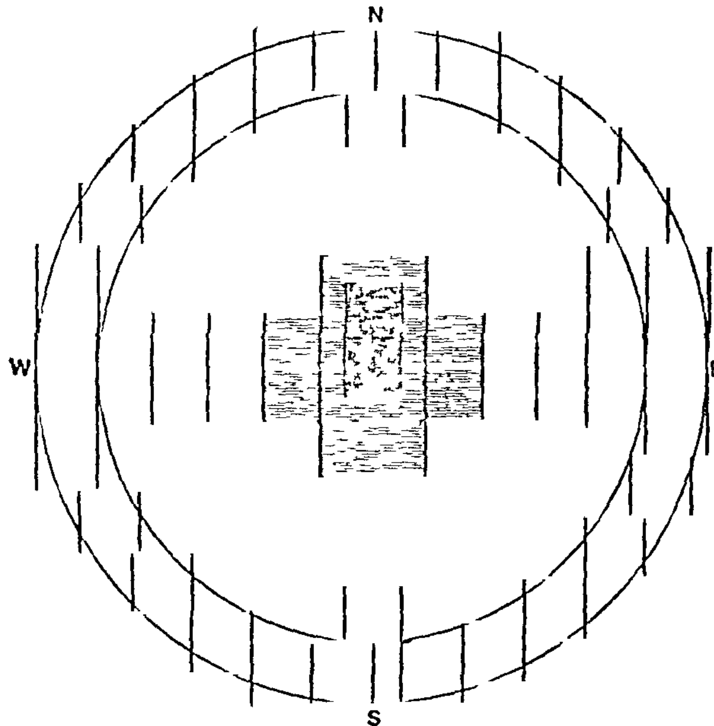
Various methods were in use not only with regard to the pillar and its proportionate parts, but also when measuring the mouldings of the socle, (see Part V, note 50), and the projections were expressed in terms of their respective height. Whereas the diameter of the column at the base was often taken as a module of the Greek temple, in the Indian temple, the width of the 'pillar' at the top is the module of the mouldings, etc. or 'accessory parts' (aṅga) only.

[11] This plan of the temple at Ambarnāth has been published in the 'The Indian Antiquary', vol. III, another in 'Mediaeval Temples of the Dakhan', A.S.I. vol. XLVIII, Pl. IX. The latter plan shows in detail the wall facets of the 'pratyaṅgas'.

The theme of the Prāsāda is transferred to the large Mandapa, the hall in front of the temple  Such Mandapas were added and form part of the Hindu temples in the later period only, in the earlier temples, the Mandapa is but a broad porch in front of the Prāsāda (Chart I)




Central Part of the First Layer of the Agni of the Soma Sacrifice




Central Part of the Fifth Layer of the Agni of the Soma Sacrifice

The stepped plan of this temple follows closely the lay-out of the strata of the Agni of the Soma sacrifice (shown above) [12]  A living memory builds the buttresses

[12] SBE vol XLIII pp 17, 98

of the Hindu temple in a pattern similar to that by which the bricks were laid in the Vedic Altar. These offsets of the walls of the temple have but the appearance of buttresses without however fulfilling their structural purpose. While they strengthen the walls, they do not counteract any thrust; fundamentally they are the monumental consequence and form of a theme laid out from the centre, 'brick' by 'brick' (vinyāsa). When the Vāstupuruṣamaṇḍala is drawn on the square floor of the Prāsāda to be built the number of its squares is also that of the divisions of the ground plan of the temple. This however is in practice not the case in the later temples; the side of the principal Vāstupuruṣamaṇḍala of a Prāsāda is divided into 8 or 9 equal parts, respectively, etc., whereas the division of the square Kṣetra in the later mediaeval temples requires at least 10 parts (see infra). The Vāstumaṇḍala however remains the guiding principle or the prototype of all architectural division unaffected by the variety of temple types that rest on it. If on the other hand the Vāstumaṇḍala is co-extensive with the entire site plan of a temple establishment, the position of the shrines of the different divinities are assigned according to the plots occupied by the Vāstudevatās.[13]

With the prototype of the Vāstumaṇḍala as the tonic, the ground plan is laid out rhythmically 1) from the centre, 2) along its perimeter and 3) once more from there in rhythms in which is summed up the inner impact of movement; it acquires visibility on the outside of the building which is clasped by its indentations and arises in the gradations of its planes.[14]

[13] A plan indicating the position of the images (and shrines) of the Parivāradevatās within a Viṣṇu temple of 7 enclosures is drawn by T. A. Gopinatha Rao, 'Elements of Hindu Iconography', Pt. ii, vol. I, Appendix A. The images are assigned to the quarters and the intermediate directions and also to points in the middle or at other regular intervals between the quarters and sub quarters. From there, diagonally towards the centre the images are placed.

While the image occupies the Brahma part (Brahmabhāga) in a Garbhagṛha which is divided into seven ('Agnipurāṇa', LV. 1 f.), the linga should not be placed exactly in the centre of the Garbhagṛha but slightly north east of it at the distance of half a barley corn or barley corn (yava) in order to avoid the piercing (vedha) of the centre ('Agnipurāṇa', XCVII. 4 5). By this slight deviation the rules of the Vāstupuruṣamaṇḍala are observed and mechanical symmetry is being avoided.

[14] See Plate XLIII. These offer their vertical surfaces into which are sunk niches containing images of the gods, or else the images protrude from the walls as if they had stepped forth from their vertical surfaces. They are set in niches (Pl. XLIII) or framed by any device (in Orissa, etc., also Pls. LXXI, III). In them the impact from the centre seems to be given iconographic shape. In this way also the images on the walls of the temple have their place rhythmically determined with ultimate reference to the Vāstumaṇḍala.

CHART I

# THE PROPORTIONS OF T

| Module | Width of Prāsāda (W) or Mūlasūtra* | Viśvakarmaprakāśa, VI 56 81 Matsya Purāṇa, CCLXIX | | | | Bṛhat Saṃhitā LV | Bhaviṣya Purāṇa I CXXX | |
|---|---|---|---|---|---|---|---|---|
| | | I śl 1-6 | II śl 8 14 | III śl 15-27 | IV śl 21 27 | V śl 11 16 | V 18 19 | I 19 22 |
| | | According to a division of the area of the Prāsāda into 16 sqrs (X=side of a square) | Proportionate to the height of the Linga (L=H of Linga) | According to a division of the area of the Garbha gṛha into 9 sqrs (Y=side of a square | According to a division of the width of the Prāsāda into 3 (Z=side of a square) | According to a division of the area of t 64 squares ($X_1$=Side of a squ | | |
| Proportionate measures of the Plan of the Prāsāda | Area of Garbha [ Gṛha] | 4 squares | 16 squares | 9 squares | | | | |
| | Area of the Border occupied by the Walls | 12 squares | 20 squares | 16 squares | | | | |
| | Width of Prāsāda | 4X=W | 3L=W | 5Y=W | 3Z=W | $8X_1$=W | | |
| | Width of Garbha [ Gṛha] | 2X=W/2 | 2L=2W/3 | 3Y=3W/5 | 2Z=2W/3 | $4X_1$=W/2 | W/2 | W/2 |
| | Thickness of Wall | X=W/4 | L/2=W/6 | Y=W/5 | Z/2=W/6 | $2X_1$=W/4 | | |
| | Nemi, the zone of projection (nirgama) of Rathakas | | | | | | | |
| | Pradakṣina (Bhramaṇa) [Circumambulatory] | | | | Z=W/3 | | | |
| | Prāggrīva Projection of the entrance in front of the Prāsāda | 2X=W/2 | 3L/2=W/2 | | | | | |
| | Jagati, width of the plinth or terrace of the Prāsāda | 2X/5=W/10 | | | 4Z/5=4W/15 | | | |
| and of the Maṇḍapa | Maṇḍapa (its width) | 4X=W | 2W | | | | | |
| | Maṇḍapa (its projection or depth) | 3X=3W/4 | | | | | | |
| | Mukhamandapa (the middle portion of the Maṇḍapa, its width) | 2X=W/2 | W | | | | | |
| Proportionate vertical measures | Height of Wall (Bhitti, Jaṅghā) of the Prāsāda Wall= Jaṅghā plus Ūrdhvakṣetra | 4X=W | 3L=W | 5Y=W | 2Z=2W/3 | | | |
| | Height of Śikhara | 8X=2W | 6L=2W | 10Y=2W | 4Z=4W/3 | | | |
| | Height of Śukanāsā (Śukaṅghri) | | W/2 | 5Y/2=W/2 | | | | |
| | [Projection (nirgama) of Śukāṅghri] | | | | | | | |
| | Height of Vedi | | W/2 | 5Y/2=W/2 | | | | |
| | Height of Kaṇṭha and Āmalasāraka | | W/2 | 5Y/2=W/2 | | | | |
| | Height of Kaṭi | | | | | | | |
| | Height of Jagatī | | | | | | | |
| Proportion of the Entrance [Γ] | Width of the Entrance (doorway, dvāra) | | | | | $16X_1$/3=H/3 −2W/3 | | H/3 -W |
| | Width of the threshold (Udumbara) | | | | | $X_1$=W/8 | | |
| | Width of door jambs (śākhā) | | | | | $X_1$/2=W/16 | | W/16 |
| | Height of the Entrance (dvāra) | | | | | $X_1$/2=W/16 | | |
| | Thickness of door jambs (śākhā) | | | | | $2X_1$=W/4 | | |

| | Garuda Purāna I XLVII | | | Hayaśirṣa Pañcarātra, ch XIII (310 17, 318f) Agni Purāna, ch XLII | | Agni Purāna, ch CIV 1 11 | | |
|---|---|---|---|---|---|---|---|---|
| VA 1 5 | I A 6 10 | II A 11-13 | IV 17 18 | I A 1-8 | II B 9 22 | I | III | VI [cf II] |
| Prāsāda into ) | According to a division of the Vāstu (=area of the Prāsāda) in to 16 squares | Proportionate to the height of the Linga (L) | According to a division of the width of the Prāsāda into 3 | According to a division of the Kṣetra=Vāstu into 16 squares | Proportionate to the height of the image (I=Height of image | According to a division of the Kṣetra into 16 squares<br>(X=side of square) | 25 squares<br>(Y=side of square) | 36 squares<br>(Z= side of square) |
| 16 squares | | | | | | | | |
| 18 squares | | | | 4 squares | | 4 squares | 9 squares | 16 squares |
| | | | | 12 squares | | 12 squares | 16 squares | 20 squares |
| $3X_1$=W<br>$1X_1$ W/2 | 4X - W<br>2X - W/2 | 4L=W<br>2L=W/2<br>L=W/4 | 3Z=W<br>2Z=2W/3 | 4X=W<br>2X=W/2<br>X=W/4 | 3I=W<br>2I=2W/3<br>I/2=W/6 | 4X=W<br>2X=W/2<br>X=W/4 | 5Y=W<br>3Y=3W/5<br>Y=W/5 | 6Z=W<br>4Z=2W/3<br>Z=W/6 |
| | 2X/5=W/10 | | Z=W/3 | | I/4=W/12 | X=W/4 | Y=W/5 | Z=W/6 |
| | 2X W/2 | | | W/2 | W/2 | | | |
| | | | | 16X or 8X = 4W or 2W | | | | |
| | | | | 4X=W<br>3X=3W/4 | | | | |
| | 2X=W/2 | | | 2X=W/2 | W/2 | | | |
| $8X_1$ - W | 4X=W | 4L=W | 2Z=2W/3 | 4X=W | 3I=W | | | |
| J=U | | | | | | | | |
| $8X_1$ W<br>$4X_1$ - W/2<br>$4X_1$/3 or $4X_1$/5<br>=W/6 or W/10<br>$2X_1$ W/4<br>$2X_1$ W/4 | 8X=2W | 4L=W<br>2L=W/2<br>2L/3 or 2L/5<br>=W/6 or W/10 | 4Z=4W/3 | 8X=2W | 6I=2W<br>3I=W | 1/2 | of the respective Śikhara<br>1/2 | 1/2 |
| | | | | | W/2<br>W/2 | 1/4<br>1/4 | 1/4<br>1/4 | 1/4<br>1/4 |
| | | | | | | W/2 or W/3 | W/2 or W/3 | W/2 or W/3 |
| | | W/8 | | | | | | |
| | | W/4 | | | | | W of E/2<br>W of E/2 | |
| | | | | | H=2W of Γ | | H=2W of Γ<br>W of E/4 | |
| | | | | | Prāsāda/4<br>3P/4 | | | |

## POSITION AND ORIENTATION OF THE TEMPLES

As the positions of the images are fixed in relation to the Vāstumandala underlying the Prāsāda, so are, theoretically at least, the positions determined of the various temples within any kind of settlement and also outside of it and in relation to it

Hamlets, villages, market towns, citadels, cities, capitals and suburbs, all these walled habitations,[15] as the Prāsāda itself, are laid out on the Vāstupurusa-mandala, and the temples of the village or city have their place assigned on it In practice, equal in Śaiva and Vaisnava texts, the main position of a Śiva temple is in the North-East, in Īśāna, and that of a Visnu temple in the West, in Varuna, the Centre is the place for the temple of Brahmā, or of Visnu or of any other form of God as the main divinity of the temple Buddha and Jina temples, which belong to the heretics, are assigned generally to the South-West On all other points there is as much agreement as diversity in the different Śāstras, so that the "Kāmikāgama', ch XXVI 6 lays down that in this, the 'Kāmikāgama', the situation of a temple of Ganesa is in the West, or South-West or between the North-West and the North or elsewhere [16] In the chart on p 234, several texts are put together which are more or less explicit on the positions of the temples Where the temple of a divinity is set up depends upon the branch and phase of the tradition followed at the time and place of building The worship of the Mothers, for example, whose temples and images the 'Kāmikāgama' gives as stationed in the North-East or the North (XXVI 8), and other texts in the South, is said in this text (ib 18) to have been performed but recently by the Brāhmanas Apart from the positions of the Śiva principle in the North-East, Sūrya in the East, the Visnu principle in the West and the Brahmā principle in the Centre, the temples of the many forms of God are frequently assigned more than one place even in each single text The temple of Brahmā moreover according to South Indian tradition, it is explicitly enjoined in the 'Kāmikāgama', should not be in the centre, its place is in the SSW and S (ch XLIX) or in the NE (ch XXVI 2)

The latitude in assigning positions to the temples contrasts with the definite rules for their orientation, the margin of their application, however, is equally

[15] The following are enumerated as walled habitations (prākārāntarathāvāsa) in the 'Ī P' III ch XXV, 13-15 Grāma, Kheṭaka, village, hamlet, Kharvata, market town, Durga, citadel, Nagara, town, city, Rājadhānī, capital, Pattana, town, etc etc and Śākhānagara, suburb In most of the other texts, all these walled settlements are implied in the designation "village, etc" (grāmādi)

[16] cf XXVI 7, where the position of a temple of Durgā is given in the South or South West or North-West or East or between the South and South-West

In chapter XLIX however of the same text, the 'Kāmikāgama', Subrahmanya is assigned to the SE, whereas the plots of Sugrīva or Varuna are his in ch XXVI

Some of the positions prescribed in ch XLIX are given in the chart This chapter moreover lays down in which directions Nāgara, Drāvida, Vesara and Sārvadeśika temples are to be built, not only in the eight directions, but for example in the SSW, etc

# THE POSITION OF THE TEMPLES IN VILLAGES, TOWNS, Etc

| Texts | Vaikhānasāgama II | Īśānaśiva Paddhati III 25 64 66[A]* 67 72[B] | Kāmikāgama XLIX 124 10 | Samarāṅgana Sūtradhāra X 107 32 | Mānasāra IX 255 86 Nandvāvarta | 109 13 Daṇḍaka | 381 409 Svastika | Tantra samuccaya I I 29 |
|---|---|---|---|---|---|---|---|---|
| NE | Śiva (Īśāna) facing E | Śiva [A, B] (Īśāna) † Vāstu cāmundā (Aditi) Ganeṣa (Jayanta) | Agni Nāgara Drāvida | Maheśvara Śri Vahni (Agni) | Śiva Lakṣmī (Aditi) Nṛsiṃha | Śiva (Parjanya, Udita) | Cāmuṇḍā (outside the settlement) facing N | Śiva |
| E | Sūrya (Āditya) Facing W Viṣṇu | Sūrya [A and B] Gauri, Śri [B] Viṣṇu Kṣetrapāla | Drāvida Vesara | Sūrya Viṣṇu Indra Dharma | Śiva or Viṣṇu | | Sūrya (Āditya) Viṣṇu (Indra) Śiva (Īśa, Jayanta Parjanya) | Viṣṇu |
| SE | Ganeśa (Bhṛsa) facing E | Viṣṇu (Bhṛsa) Kāli (Agni) [A] | Viṣṇu Vesara | Sanatkumāra Savitri Maruts Māruta | | | | |
| S | Vindhyavāsini (Yama) | Guha[A] (Yama) Mātrs [B] | Viṣṇu Lrahmī Vesara, Drāvida | Ganeśa, Mātrs Bhūtas Yama | Vāmana | | Viṣṇu (Vivasvān) | |
| SW | Ṣaṇmukha (Sugriva) | Ganesa (Nirṛti) Buddha, (Sugriva), Jina (Bhṛnga) [A] | Soma Vesara | Bhadrakāli Pitarah Caitya | Subrahmanya (Dauvārika) Buddha, Jina | | Subrahmanya (Sugriva), Jina (Nirṛti), Bhārga (Bhṛngarāja, Gandharva) | Ganeśa (Nirṛti) |
| W | Viṣṇu (Varuna) (Āsana and sthānaka images) facing E | [A and B] Viṣṇu (Varuna), Kirttikeya [B] | Viṣṇu Drāvida, Vesara | Oceans, Rivers, Viśvakārman, Prajāpati Varuna | Vāsudeva Śiva Nṛsiṃha Durgā Ādiviṣṇu | Viṣṇu (Varuna or Mitra) | Viṣṇu (Mitra, Varuna) | Viṣṇu |
| NW | | [A and B] Jyeṣṭhā (Vāyu) Candi [A] (Mukhya) | Nāgara Drāvida | Serpents Saturn Kātyāyani | | | Buddha (Vāyu) | Durgā (Vāyu) |
| N | | Candi Manā Kāli (Niśākara) Mātrs, Durgā Kṣetrapāla [B] | Soma, Śāsti Nāgara Vesara | Viśākha Skanda, Soma Kuvera | Keśava, Nārāyana Sarasvatī (Mukhya, Bhallāṭa) | | Kāli (outside) | Skanda‡ |
| Centre | Viṣṇu | Brahmī [B] | Soma, Vighneśa Vesara | | | – | | All the gods |
| Intermediate Directions | | | | | Śiva | | Śiva (in inner rim) | |
| 8 Directions | Mātrs (all around), Viṣṇu | Lokapālas | Pārvati Kṣetrapālas Sāstādesika | | Viṣṇu Ganeśa | | Ganeśa Durgā | |
| Outside | Viṣṇu but not in the North Pañcavīras | | | | Viṣṇu | Viṣṇu Śiva | Bhairava | |

* A and B indicate different traditions recorded in the 'Īśānaśivagurudevapaddhati'
† The words within brackets denote the plots of the divinities of the Vāstupuruṣamaṇḍala
‡ Guha Skanda, Ṣaṇmukha and Subrahmanya are names of Kārttikeya
The chart shows the positions of most, though not of all the temples given in the respective texts

broad. Given any position it is of primary importance where the temple faces. In the orientation of the temples three principles combine (1) the orientation proper, for the temple should face the East, the rising sun, (2) the temples should face the Centre of the settlement, the village or town, etc., (3) God in his peaceful (sānta) image should be located in and turned towards, the habitations of men, God in his wrathful (ugra) image should be situated outside and face away from the habitations of men. The 'ugra' aspect of the image is linked up with the quality 'tamas', which implies destruction, and with Abhicārika rites.

The cosmic orientation, with reference to the Sun, the metaphysical orientation, with reference to the Centre of the Vāstupurusamandala and of every settlement of men, and the orientation with regard to man, the living being (jīva), his welfare and peace are the considerations which determine where a temple faces.

The first consideration is primeval and remains the basis of orientation. Most of the preserved temples face the East, others the West. It is therefore said that it is best if a temple has its door to the East and that it is good if its door is to the West. While however it is admissible that a temple faces South it is not desirable that it should face North.[17] This is observed also when the second consideration prevails, for it is said that the temples in the East, should face West, and those in the West should face East, and the others clockwise (pradaksina) so that those in the North face South but those in the South should not face North ('Samarāngana-sūtradhāra', X. 112). Not only the temples in the town should face its centre but also those outside the town. If for some reason, such as the terrain, etc., the temple and with it the image in the Garbhagrha have to face away from the town this is remedied by painting on the wall of the temple a likeness, identical in all iconographic matters to the image in the Garbhagrha. The painted proxy on one of the walls of the temple then faces the town, for in paintings, the gods may face in any direction (ib. X. 125, 128).

The temples and images that are turned away from the village or town are those which are not auspicious, says the same text (ib. 124). Temples of Narasimha should face away from the village ('Mānasāra', IX, 270) whereas all other images and temples of Visnu should face the village or town (ib. 268). While images of Rudra are not to be placed within the settlements of men ('Kāmikāgama', l. c. 30), the image of Śiva in the North-East should also be outside and face away from the town ('Īsānasivagurudevapaddhati', Pt. III. ch. XXV. 68). The latter applies also to temples of Śiva in the intermediate directions. Only those situated in the East or West should face the village, town, etc. ('Mānasāra', IX. 271-75). The latter two situations are not particularly those of Śiva temples, should these be built there, they conform with the rule valid for the other temples, like the gods of the Vāstupurusa-mandala they all face the Brahmasthāna, the Centre. In its principle however, which is Tamas, destruction, the Śiva temple has its proper position in forests and on mountains ('Samarānganasūtradhāra', X. 122). Even though a Śiva temple may be placed not only in the outer, but also in the inner border of the Vāstumandala, it should face away from the settlement of men.

[17] 'Vaikhānasāgama' ch. II.—The cremation ground is to the north of the village, etc. and the Cāndālas live there. The contagion of the dead body, its impurity, must not enter the temple.

The triple orientation, towards the Sun, towards the Centre and towards man, provides for diverse contingencies, so that summing up, in the 'Mānasāra' (l c 276), it is said that the main door of the temple of all images except those of Visnu, which always (but not in his terrible aspects) face the town, and those of Śiva which, as a rule, face away from it—may be in any direction In truth, wherever the temple faces, to a Tāntrik the East lies between him and the image [18]

[18] "Pūjyapūjakayormadhye prācīm tu parikalpayet"

Dr Coomaraswamy, in 'A New Approach to the Vedas', explains the orientation of temples, in accordance with 'Chāndogya Upanisad, III 6 11, and with the sunrise in the East, South, West and North respectively which depends on one's own spiritual condition, for the Sādhyas the sun rises in the Zenith and sets in the Nadir, and finally for those who know the essential truth of Brahman, the Gnostics, the Supreme Sun, risen in the Zenith, stands there in the middle, neither setting nor rising The direction of the rising sun, (whether E S W N, spiritually) is always spoken of as East empirically

## THE NORMS OF PROPORTIONATE MEASUREMENT

### (A) From the Sixth Century A D to c 900 A D

The relatively few preserved shrines, from the fifth century A D and prior to the eighth century A D , are sufficiently varied in plan and elevation to suggest that among the large number of temples which must have decayed and vanished further types were represented Their differences were due partly to the integration of sanctuaries of heterogeneous origins into the Hindu temple Manifold solutions were arrived at while embodying the dolmen type or also the 'hall' type (see infra, pp 281-85) and others By the sixth century, twenty shapes of temples are recorded (Chart II), each has a name and specific features [19] They are variations of certain fundamental themes or norms, by which are regulated the symmetry of their horizontal and vertical proportions, five or six norms of proportionate measurement, of which some admit of alternative versions, are given in the early texts dating from the sixth to the ninth century approximately (Chart I)

The module of proportionate measurement is either architectural or it is taken from the main cult object The architectural module is the outer width of the wall of the temple, the Mūlasūtra or Mānasūtra of the square Prāsāda (Norms I, V, and IV), and secondarily also (Norm III) the inner width of the Prāsāda which is equal to the Garbhagrha All the main horizontal as well as vertical proportions are referred to the Mūlasūtra, the basic width This is differently expressed, the area of the Prāsāda is to be divided into 16 (Norm I) or 64 (Norm V) squares, its width is 4 or 8 units respectively and refers in either case to the Vāstumandala called Mandūka All the proportions here form octaves, the width of the Garbhagrha being 2, that of the Prāsāda is 4, this is also its height, it is a perfect cube and from it rises the Śikhara to twice this height, the wall measuring 4, the Śikhara has 8 units in height The geometrical progression width of Garbhagrha, width of Prāsāda or height of wall, and height of Śikhara—links the temple in its horizontal and vertical extent and interrelates their main parts Analogous is the proportion between the thickness of the wall, its internal and external width The ratio 2 1 or the Octave is the leading theme of the first norm as given in the 'Visvakarmaprakāśa', with it is interwoven the Fifth, as the total height of this kind of temple is three times the width of the Prāsāda, the height of the Śikhara being two thirds of it [20]

[19] Sāmānya or Sarvasādhārana are the terms in the 'Visvakarmaprakāsa', 'Matsya' and Agni-purānas' (Ch XLII) with reference to norm I of the Prāsāda The 'Brhat Samhitā', the earliest datable text, lays down only one norm or set of rules for the Prāsāda (Norm V, in Chart I) The 'Agnipurāna', ch CIV, includes under 'sāmānya lakṣana' three norms of proportions (see Chart I) , the prescription of one or several norms precedes in each case the enumeration and description of the 'specific features', (lakṣana), that is of the 20 or 45, varieties of temples The 'Viśvakarmaprakāsa' is the source of M P , and the 'Havaśirsapañcarātra' of A P

[20] The 'Garuḍa Purāna', the 'Hayasirsapañcarātra', and the 'Agnipurāna', ch XLII,

The 'Bṛhat Saṃhitā' gives only one Norm of proportionate measurement (V) and this not in detail,[21] whereas the 'Viśvakarmaprakāśa' and 'Matsyapurāṇa' convey wider information The total height of the temple in the 'Bṛhat Saṃhitā' is double the width of the Prāsāda [22] The thickness of the wall, its inner and outer width are related in the geometric progression 1 2 and 2 4, and analogously proportioned are the inner and outer widths of the wall—the latter however is not equal to its own height nor is the Śikhara twice as high—and the total height of the temple The height of the wall, the Kaṭi, is 1/3rd of the total height, steps lead to it The base, the Jagatī ('Viṣṇudharmottara', III LXXXVI 4), is also 1/3rd of the height of the building, also the superstructure A high base is not provided by the norms of the 'Viśvakarmaprakāśa', etc , the superstructure dominates, is double or at least equal to the rest of the building Two sets of proportionate measurement are combined by Varāhamihira The proportions of the entrance however once more form a geometric progression The width of

follow Norm I of the 'Matsyapurāṇa' The two latter texts use the term Jaṅghā (pillar) for the height of the wall, and Mañjarī (shoot) for Śikhara In open, pillared buildings, such as are represented in Barhut the pillars (Jaṅghā) of the groundfloor support the second floor, etc , and no walls are there Jaṅghā originally denotes the pillar and has its meaning—in some cases also its shape (Pl XLIII) transferred to the wall

Jaṅghā, in the 'Garuḍa Purāṇa' denotes the vertically divided part of the wall corresponding to the 'uprights' or shafts of pillars It is the lower part of the wall (bhitti), its upper portion or entablature with its horizontal mouldings is the Urdhvakṣetra, this term however may as well connote the lower part of the wall, i e , the Vedibandha, or the socle The text not being explicit, the above rendering of Ūrdhvakṣetra is only tentative —Cf the Jaṅghā in Orissan architecture The G P and A P , ch CIV, treat of the "45 Temples" (p 277)

[21] The 'Br Saṃ ', LV 11, says "The height of the Prāsāda should be twice its width , the Kaṭi of the Prāsāda should be one-third of its (the Prāsāda's) height That is called Kaṭi (=hip, above the Jagatī) where the temple starts from above the steps" (ib , comm ) In the commentary on sl 16 however, Kāsyapa says that the Kaṭi is 1/3rd of the width of the Prāsāda A plain stone wall (Kaṭi) or one of timber, having pilasters, etc (Jaṅghā) and following in its division their structure, were described originally by different names This led to discussions of the respective proportions The Br S LV 29 30, recounts a seeming discrepancy of measurements as given by Viśvakarman and Maya The height of a storey (bhūmi) is said to be 84 angulas by the one preceptor and 108 by the other The difference however is accounted for The height of the Kapotapālī (the 'ūrdhvakṣetra') is not included in Viśvakarmā's statement —A reconstruction of the temples on the basis of their proportions as given in Vāstu-sāstra, will be possible only when further sources are explored The 'Viṣṇudharmottara' describes temples which have found no place amongst the temples of the texts collected in charts I, II, etc 'Jagatī is employed in the 'Hayaśīrṣapañcarātra' and the 'Agnipurāṇa' Jagatī means 'earth' and covers the raised ground, platform or terrace from which the temple rises In the later usage it is the name of a horizontal moulding only (Part V note 50)

The width (vistāra) of the Jagatī varies from one-third to four times the width of the Prāsāda The two last named texts explicitly speak about the width of the Jagatī and give it as equal to or double the height of the Śikhara of the temple The method of expressing the proportionate measurements of the horizontal parts of the temple with reference to the vertical ones and the vertical with reference to the horizontal shows that the building was regarded as a three dimensional unit interconnected in all its parts

Such wide terraces or plinths are in existence in the temples at Bhitargaon and Deogarh

[22] Cf N K Bose, 'Canons of Orissan Architecture', op cit , p 93

the doorjambs being equal to the space or width of the threshold, the width and height of the door again form the geometric progression 1, 2, 4. This is given in detail in the 'Brhat Samhitā' with reference to the temple whose height is twice its width.

Not only on the outside but also in the interior is the division by three fitted into the leading proportions. It is introduced at the very centre of the Garbhagrha, by the height of the image. It is two-thirds of the height of the door, yet not of the complete height but of seven-eighths of it. Together with its pedestal which has half the height of the image it extends to seven-eighths of the door. Were it equal in height to the door, this absolute integrity would not appear so to the eye. The image would then not look as if framed by the entrance, and housed in the shrine, but it would touch the height of the lintle and seem to cut across it.

The Prāsādas, built according to Norm I or V, in their horizontal and vertical proportions and the interrelation of these, are essentially based on the division of the area of the Prāsāda in 64 or 16 squares (pada) respectively. This principle laid down in the Mandūka plan, of which the mandala of 16 squares is a reduction, regulates the coherence of the building in the three dimensions.

In Norm IV, of the 'Matsyapurāna' the width of the Prāsāda is to be divided into three parts, the outer width being 3, the inner width of the wall which is that of the Garbhagrha is given as 2, with the introduction of the ratio 3 : 2 corresponding to the Fifth, in the ground plan, the main vertical proportion, *i e*, of the superstructure, the Śikhara, to the perpendicular wall remains that of the Octave, 4 : 2, while the ratio of the width of the Prāsāda and its height, is 3 : 6. This shows the two themes, the horizontal and the vertical, linked and combined. While the single parts of the temple are measured by the module of which they are a multiple or an aliquot part, they are also referred the one to the other and their proportions are expressed by each other. In Norm II, the Śikhara is divided into 4 parts of which the two lower are designated as Mañjarī, half its height is that of the Śukanāsā. Above the Mañjarī is the Vedi, its height is 1 part and so is that of Kantha and Āmalasāraka. Mañjarī, however, in the H P, is a synonym of Śikhara, the Śukanāsā has half its height. This great height distinguishes the Śukanāsā of some of the earlier extant temples.

In the Prāsāda, Norm III, the width of the Garbhagrha being divided into three equal parts, the respective measurements of the ground plan form an odd series (visama) 1, 3, 5. While the ratio of the widths of the outer to the inner square of the temple is 5 : 3, that of the width of the Prāsāda to its height is 1 : 3, the height of its Śikhara in relation to the wall is 2 : 1, and its total height to the Śikhara 3 : 2, this corresponds to the ratios of the Octave and the Fifth.

In Norm II, finally, the module is not architectural, it is the height of the sacred object housed in the Prāsāda: the Linga, or the image. While the main architectural module is invariably taken from an horizontal extension this is vertical. The architectural module belongs to the lay-out of the Citi, the massive pile, which is the support of Linga or image. The vertical direction of the latter, however, which is that of ascent, is imparted as module to the building according to Norm II. Its main measures in the plan, the width of Prāsāda and Garbhagrha, are also those of Norm IV of the 'Visvakarmaprakāsa' and the 'Matsyapurāna' whereas the proportions of its vertical section agree with those of Norms I and III.

The 'Garuda Purāna' gives different proportions which also have the height

of the Linga as module (Norm IIA) They are 4 2, 4 8, 4 4, the proportions in the plan form the geometric progression 1 2 4 whereas the ground plan of Norm II does not yield any of the 14 classes of series (sredhī) nor the geometrically progressive series (guna sankalita) of Indian mathematics [23]

The main architectural parts of the temple, in the horizontal and the vertical, form progressive series, arithmetical or geometrical in the ground plan, and geometric or harmonic—in the measures of the plan and the vertical section of the temple [24] The harmonic proportion is established between the width of Garbhagrha and Prāsāda, the width or height of the wall and the height of the Śikhara (Norm I), or, between the widths of Garbhagrha and Prāsāda, and the width of the Prāsāda to its total height (Norm IIA and V) In Norm III, the width of the Prāsāda = the height of its wall, the height of the Śikhara and the total height of the Prāsāda form the progressive series 5 10 15 With these series are combined as proportionate measurements, the ratios, 2 1, and 3 2 corresponding to the Octave and to the Fifth in music [25]

The 'Brhat Samhitā' gives the purest type in which the parts are related with each other and with the whole in a geometrically progressive series The temple, moreover, is based on the Mandūka-mandala The pure Octave prevails in the proportions of the plan and also of the plan and the height of the Prāsāda The Fifth, the ratio 3 2 is introduced in the height of the image and its pedestal and a division by three is effected of the height of the temple The 'Brhat Samhitā' however is silent about the proportions of the Śikhara, the 'Bhavisya Purāna', at a later date, repeats the statement and omission of the 'Brhat Samhitā' in which two sets of norms appear to have been fused They belong to different types of structures The elevation of the one consists of three main parts of equal height the socle, the perpendicular walls and the superstructure or roof ('Visnudharmottara', see Appendix) whereas the other has two main parts, the walls and the superstructure, the latter equal in height to the wall or twice as high The norms of the other set are given in the 'Visvakarmaprakāśa', etc (Chart I), they include the sections of the Śikhara The Śukanāsā plays an important part

Śukanāsā means the 'nose' or beak of a parrot, its outlines are curved, Śukaanghri means 'parrot pillar', the height and also the projection from the body of the curvilinear Śikhara, to which this 'nose' or 'pillar' belongs, are given Another name for pillar is 'Janghā' the latter being commonly used to denote the wall, 'nose' or pillar here denote the same, an antefix or wall-like projecting part of a particular shape, on the Śikhara of which it occupies, according to the early texts, ¼ or ½ of the

[23] Gurugovinda Chakravarti in an article on 'The Growth and Development of Progressive Series in India', 'Journal of the Department of Letters', Calcutta University, vol XXIV, states that "the Hindus were acquainted with the arithmetic and geometric series only The harmonic series is purely a Greek contribution" It is however "historically recorded that sacrificial altars were constructed in ancient India in accordance with the proportions of the root rectangles" (J Hambidge, 'The Parthenon', Introduction by L D Caskey, p XVI)

[24] The measures of the ground plan, according to Norm II, which are 1, 4, 6 respectively, are the only exception

[25] These ratios in music, are between lengths of identical strings and at the same tension Numerically these musical intervals correspond with the ratios of the proportionate measurements of the temple

total height In later temples, (Pls XLVII, XLVIII) the proportion of Śukanāsā and Śikhara are different Śuka, in this combination, does not indicate the curvilinear shape of the Śikhara to which the Nāsā is attached Nāsā, Mahānāsā and Nāsikā are terms widely used in later texts from South India ('Kāśyapaśilpa', XXII, 'Śilparatna', XXXV, 1-27, etc ) where they denote exactly the same shape as in the early texts, the structural function of the Śukanāsā is linked with the meaning of its curved, symbolical shape As symbolic form it appears, repeated on the four sides of the Śikhara, on its body, but in South India Nāsās and Nāsikās flank the Śikhara or cupola of the high Temple of the superstructure, its Bhūmis are beset with them (Fig h, p 187) and small 'Nāsīs' are carved even at the base of the temple [26]

Sukanāsā or Śukāṅghri is a projection from the main body of the Śikhara, it has $\frac{1}{4}$ or $\frac{1}{2}$ its height, and one third or one fifth part (Norm VA) of its own height is the proportionate measure of the projection (nirgama) of this compact, shield-like antefix to the body of the Śikhara Its width is equal to that of the Garbhagrha ('Garuda Purāna', I XLVII 3) Its outlines are curvilinear, its shape is that of the 'sun-window' proper or Gavākṣa (literally "ray-eye"), its archivolt is filled with many figures and augmented by further images, it generally wells forth from the mouth of a Kīrttimukha (Pls XLIII ff ) [27] The original position of the *Śukanāsā is on the front of the Śikhara* Amongst the preserved temples, *some in* western India, the Pāpanātha temple in Pattadakal shows the Śukanāsā about half as high as the Śikhara, in temples built subsequently, for instance in Gwalior (Pls XLV-XLVIII) or Orissa, its replica, diminished in size (Śukanāsikā) is combined with the central offset ('rathā', or also 'pāga') in the three remaining cardinal points on the Śikharas Incorporated in its bulk it retains the symbolic value of the original position Its 'place value' accompanies it, as it does also other architectural forms whose original structural function is remembered, in its symbolic suggestiveness even where it is no longer put to any practical use This refers also to the doors which have become massive doors (ghana-dvāra) or niches, in the four main directions at first, and then at regular intervals on the walls and to all kinds of the equally solid 'Sun window', the Gavākṣa or Nāsikā This, from being the 'eye' or curve (akṣa) through which pass the sun's rays into the temple—as is seen in the rock-cut Buddhist temples where this early Indian architectural form is preserved, in its petrified state—was converted into a paradoxical shape, a solid window, symbol of the radiance of the Light from within the temple Repeated in its reverse function as unit of form, the Gavākṣa became a lace-like pattern of indefinite extensiveness made to fit any shape to which it was applied (Pls XLIII, LXXI, etc ) Such proliferations carry in each of their units the original meaning or function including that of their place

[26] The '*Kāśyapaśilpa*', *XXII 1-25, treats of varieties of the Mahānāsī and Kṣudranāsā*

The 'Bṛhacchilpaśāstra' presupposes the 'Samarāṅgaṇasūtradhāra' It is a later compilation and has a Gujerati Commentary In Part III 95, the Śukanāsī is assigned, 9, 10, 11, 12 or 13 parts out of the 21 parts of the Śikhara, from the flat roof or ceiling (chādya) to the shoulder course (skandha) , it is about half the height of the Śikhara

Re Kṣudranāsā, or small Nāsī, see also 'Mānasāra', XIV 236, etc , Śukanāsā does not designate the curvilinear Śikhara, as assumed by R P Chanda, 'Rūpam', l c

[27] See Part VIII , Gavākṣa, Kīrttimukha, etc

The original place of the Śukanāsā is above the architrave or entablature of the temple, in front, where the entrance is. There the weight, above the architrave, of the superstructure, the Śikhara, is lessened, especially in brick structures, by a large corbelled opening. Stone permits of deeper corbelled projections than brick; the vertical opening in the front face need not be as high as in a brick temple.[28] The closing stone fixed like a protruding shield in front of this opening is the Śukanāsā; it has the shape of a blind window or massive Gavākṣa. Its thickness is given in proportion to its height. The 'Īśānaśivagurudevapaddhati', III. ch. XXIX, 3, a later text dealing with the South Indian type of the temple, gives to the Mahānāsī corresponding to the Śukanāsī in front of the building, in its original position, a projection which has half the width of the Garbha.[29]

Vedi is the attenuated portion of the Śikhara; it is half as high as the lower part of the Śikhara having the Śukanāsā and just above it. The lower half of the Śikhara, in the V. P., VI. 66, etc., is called Mañjarī. The two, the part of the Śikhara thus designated and the Vedi form its body or trunk and lead from the vertical wall of the Prāsāda in an ascending curve toward the highest point of the final. They do not reach it though, for the Śikhara being truncated, the Vedi is topped by a flat horizontal surface (skandha). Mañjarī is also used as a synonym of Śikhara.

Kaṇṭha, the 'neck', is the narrow, tubular portion above the Vedi or 'altar' (Pl. I) and it holds up the Āmalaka (=Āmalasāraka), the cogged ring-stone which is also known as Aṇḍa. Kaṇṭha and Āmalasāraka are the crowning portions of the Śikhara, above its truncated body whose curves lead towards the highest point of the final, above the Āmalaka.

Corresponding to the sections and parts of the Śikhara, the perpendicular walls of the more elaborate temples too are described in their horizontal structure; its main portion is the zone of the pillars and is thus also appropriately called Jaṅghā. The zone above this corresponds to the entablature, having an architrave, cornice (Kapota)[30] and other corresponding mouldings, etc. It may be called the "upper region" (ūrdhvakṣetra). This name however may also be applied to the zone below the pillars where it would denote the lowermost part of the wall, above the ground,—the socle projecting by an aliquot part of its height.

The 'Matsyapurāṇa' gives variations of the pure norm of the 'Bṛhatsaṃhitā'. Norms V and I are the primary alternatives when the height of the temple is twice or thrice the width of the Prāsāda.

[28] In certain stone temples, within their Śikharas, a second and sometimes even a third chamber, etc., are placed above the Garbhagṛha. (See part VI.)

[29] In the Virūpākṣa temple in Paṭṭadakal, Cousens, op. cit. Pls. XXXVII, XL, XLV, the Śukanāsā almost answers this description. The height of the Śukanāsī of this Drāviḍa temple exceeds however half the height of the superstructure.

[30] The shape of the Kapota or roll cornice is derived from the edge of the thatch and the primitive dripstone cut above cave dwellings to prevent the rain from running in (Coomaraswamy, 'Indian Architectural Terms', l. c. p. 260). Its name means 'dove', but, far from being a dove-cot, its function is not only to prevent the rain but also the doves from coming in. The 'Samarāṅgaṇasūtradhāra', XLVI, 17 f. speaks of the defilement and of the various misfortunes should a dove enter a Prāsāda; propitiatory rites have to be performed for the pigeon is the image of Kāla (Kālamūrti), of Time and Death; it is the repository of the root evil. The bird of Aphrodite, in India is the bird of Yama.

The 'Agnipurāna', ch CIV, appears to be later than ch XLII although it also adheres to the division of the Śikhara as given in the 'Garuda Purāna', but it admits four alternative proportions of the total height and the width of the Prāsāda, the height is twice, two and a quarter, two and a half, or three times the width [31] In these less pure proportions, a concession is made to the contingencies of buildings, an increasing number of possible alternative proportions and further varieties in the division of the square plan of Norm I (Chart I), etc, belong to an age when adjustments were made on the basis of the pure proportions in building the house of God in all parts of India, and in each place according to the special local facilities

Proportionate measurement, it has been shown, is meted out by means of an architectural module or else the Linga or the image is the module In the latter instance the 'Matsyapurāna', CCLXIX 26, speaks of Lingamāna[32] whereas Rūpabheda denotes the divisions (bheda) of the building by a modification (bheda) of its form (rūpa), referred to the architectural module Each of the norms of proportionate measurement comprises three classes of temples, best, middle and least [33]

To which type of extant temples do these norms refer? Some of the names of their parts appear to allow a more definite view than their proportions alone would enable us to hold Mañjarī, as part of or equivalent to Śikhara, appears to imply the curve of a young shoot, it is a curvilinear superstructure Vedi, in more recent texts, is the name of exactly the corresponding portion of the Śikhara in Orissa, where the Gandi of the Bara Deul is curvilinear, and Āmalaka is the cogged ring-stone above the neck (kantha) of the curvilinear Śikhara [34] These names taken together with the proportions seem to refer to type II, covering its varieties and development from the sixth to the ninth century approximately

[31] The chronological sequence of the texts is indicated in Chart I from the 'Visvakarmaprakāśa' and the 'Brhat Samhita' of the 6th century A D to the later chapter of the 'Agni Purāna' which corresponds to mediaeval structures (10th century) The 'Hayasirsapañcarātra' precedes the 'Agni Purāna' which has copied it Chapters I-XIV only of the 'Hayaśīrsapañcarātra' are referred to See Appendix

[32] The height of the Linga is equal to the width of the Pīṭhikā, the 'pedestal' of the Linga, which forms the central square of the Garbhagrha The border-space is called Pindikā, in the 'Matsyapurāna', whereas it is called Garbha in the 'Havaśīrsapañcarātra' and in the 'Agnipurāna' In the last-mentioned texts, Pindikā denotes the central square whose width = the height of the image or Linga Garbha and Pinda (Pindikā) on the one hand, Pīṭhikā and Pindikā on the other, are synonyms, the first pair signifies the germ, the expanding 'embryo', and the second the pedestal

[33] 'Matsyapurāna', ib, no clearer explanation of these three terms, 'Jyestha, Madhyama, Kaniṣṭha' is given there, later texts ('Agnipurāna', ch CIV), etc however give all the details of this classification in terms of measure

[34] The Āmalaka is also the crown of certain varieties of the rectilinear Śikhara (Part VI)

## (B) Proportionate Measurement About 1000 A D

In the 'Samarāṅganasūtradhāra', a standard compendium on Indian architecture of the early eleventh century, can be seen modifications in the proportionate measurement of the Prāsāda The pure proportions of the early texts are no longer observed in the vertical dimension (unmāna) but they remain binding in the plan The Śukanāsī which extended originally to half the height of the Śikhara is now given various commensurable height in the different temples (S S LV 91-93)[35]

The different height at which the Śukanāsā may terminate however is not an arbitrary nor an isolated measure on the body of the temple for it regulates the height of the Mandapa, its final must end below it The Mandapa is now established as a separate hall in front of the Prāsāda,[36] preparatory and subservient to the purpose of the Prāsāda The walls of this semi-detached hall are extended from those of the Prāsāda (Figs on pp 255 f) and are regulated in their proportions and theme by those of the Prāsāda

The Garbhagṛha or Jathara,—"the womb"—as it is also called (S S LIX 29) retains in principle its original proportions as given in the early texts In a temple with one set of walls only its width is half of that of the Prāsāda or Śīmā which may be assumed to have 10 equal parts The Śukanāsī, at its bottom, has the width of the Garbhagṛha (LV 94-100) or 5 parts, one and a half time the width of the Grabhagṛha or (garbhasūtra) is the height of that part of the Śikhara which is called its chest (uras), above it is the head (śiras), the height of the latter is half of the height of the chest (uras) or it may be one quarter only of its height (S S LV 88-101) In other words, if the Mūlasūtra is divided into 10 parts, the height of the body of the Śikhara 11¼ or 9⅜ such parts

The height of the Śikhara however exceeds, as a rule, its width at the bottom, or the Mūlasūtra If the width be 6, the height is 6½ in one type of temple, 7½ or 1¼ of the width in another variety (see below) In the temple called Vimāna, the width at the bottom of the Śikhara is 8, its height is 9½, whereas in yet another temple, the height of the Śikhara is one and a quarter its width at the base[37] Such variations are made in view of the physiognomy of each individual variety of the

[35] Excepting the 'Viśvakarmaprakāśa' the earlier texts are not full treatises on architecture but form part of large compendia, it may be objected that the pure proportions given there formed only the general rule and that many variations were implied While this may have been so, chapter CIV of the 'Agnipurāna', shows that this great compendium is aware of less pure proportions in one of its later chapters while the pure proportions are known to it in an earlier context (chapter XLII)

[36] In the early temples of the 'Bṛhat Saṃhitā' etc and the Gupta age the Mandapa was a broad porch of the Prāsāda, subsequently a separate building became added to the Prāsāda which did not harmonize with it from the start as can be seen in the Paraśurāmeśvara Temple at Bhuvanesvar, Orissa Within the tenth century however the Mandapa had become part of the temple and was regulated in its dimensions by the proportions of the Prāsāda, it always conforms with its architectural theme and within it appears frequently as a prelude or else as a counterplayer to that of the Prāsāda The separate 'early' Mandapas are described in V P VI 124-136

[37] S S LVI 161, 165, 175, 176-181 This is its proportion in the 'Bṛhacchilpaśāstra', III 82

temple, they are in consideration of its Laksanas or specific features which adorn the underlying rules (S S LVI 114)[38]

The trunk of the Śikhara or Mañjarī which is referred to here is curvilinear[39] Its curvature varies not only with the height of the Skandha, the shoulder course, from the base of the Śikhara but depends also on further factors The name of this curvilinear shape is Padmakosa or Venukosa and means a sheath, which is compared to the petals of the lotus flower (padma) around the pericarp, or is Venukosa, describes the curvilinear shape as a sheath of that reed (venu) or channel which itself encloses the vertical axis of the Prāsāda and exceeds the trunk of the Śikhara in the shape of the shaft or neck (kantha, grīvā) on which rests the Āmalaka

In the early texts, in the 6th century etc, the total height of the temple including the Āmalaka was twice or else thrice its width The general rule half a millennium later, as given in the 'Samarānganasūtradhāra' however is that the height of the temple to its shoulder-course (skandha) is twice, two and a half times, and "2 small parts (kalā)" or two times and a quarter the width of the Prāsāda (S S LVII 122, 329, 455, 492, etc) Above the shoulder-course of the curvilinear Śikhara are the neck (kantha, grīvā) and the Āmalasāraka or Andaka, which yet form part of the Śikhara Above the Āmalasāraka, i e, above the Śikhara, is the final which is composed of several parts, the Candrikā also called Padmaśīrsa, has the shape of an inverted flat bowl It supports the jar, Kalasa or Kumbha and on it is placed the Bījapūraka, the shape of the citron, or an Usnīsa (S S LVI-LIX, passim)

The proportions of the various parts above the shoulder course are now taken from the width of the Skandha, the height of the Āmalasāraka for example is given as one part, according to the number of parts, into which the Skandha is divided If for instance, in the temple Nandisāla (S S LVI 148-155), having a Mūlasūtra of 12 parts, the Skandha or Skandhakosāntara, the inner sheath of the Venu—the latter being the vertical column of the Prāsāda—is divided into 3 parts, the height of the Neck has ½, the Āmalaka 1, the Kumbha 1 and the Padmasīrsa ½ part

These vertical proportions are fractions of the width of the Skandhakosāntara, this again is referred to the width of the field (ksetra) of the Prāsāda or Mūlasūtra, being, as a rule, three-fifths of its extent The height of the portions above the Skandha of the temple called Nandisāla in units of the width of this Prāsāda is 7 1/5 out of its 12 parts[40]

[38] "Yathārham tu yathāsobham", 'Īśānasivagurudevapaddhati', III ch XXVIII 42 With an increasing latitude in the selection of the correspondence of forms on the basis of the rhythms underlying the entire structure, beauty becomes the regulating factor Beauty is an outcome of the response by the Sthapati to the given theme and to the fundamental rhythms

[39] Re the construction of the curvilinear superstructure of the Prāsāda, i e the Śikhara see Part VI In the drawings on pp 209-10, the base is assumed to have 10 and the height 11 parts

[40] The 'Agnipurāna', LXI 13-14, enumerates the Vedi, Kantha and Āmalasāraka, the Cūla and Sudarsana in CIV 22, the height of the Cūla (=Cūdā, crest) is given as half the height of the Grīvā, the neck

The base (pītha, adhisthāna, etc) is but rarely (cf the temple Rucaka) referred to The Vedibandha, the horizontal mouldings at the base of the wall however are specified (cf note 41)

If the Garbhagrha has one wall only, the temple is Nirandhāra and has no internal circumambulatory, if the Jāthara is ensconced by two walls and an ambulatory the temple is Sāndhāra (S S LVI 21) The general proportion of a temple with one set of walls only (nirandhāra) of which the temple Rucaka is the prototype is that the basic square, the Ksetra, having a width of 4 parts, the Garbhagrha has 2 and the thickness of the wall has one part (S S LVI 44-50) The height of the lower part of its perpendicular wall, the Janghā, has 2 parts and rests on a socle or base (pītha) half its height The entablature above the Janghā consists of Mekhalā and Antarapatra, the former a roll cornice or eaves shaped moulding and the latter a recessed course or "inner blade", it has ½ part in height, and the moulding, its name is generally Mekhalā, the 'girdle', but also Varandī (verandah), is given 1 part, these are synonyms for and variations of the Kapota, the roll cornice (S S LIX 133, LVI 119, 133) The perpendicular part of the temple is thus 4½ parts high and is not a perfect cube, as in the earlier temples The mouldings of the entablature or crowning part of the walls have different names and shapes, similarly also the mouldings at the foot of the wall (Vedikā or Vedibandha),[41] such as the Antarapatra and Mekhalā, so that the same profiles belong to mouldings of the wall at the base and also to the wall portion above the Janghā From this entablature or upper portion (ūrdhvaksetra) of the wall, from the Mekhalā, rises the Śikhara up to a height of four and a quarter parts of the Mūlasūtra (LVI 48)

In front of the temple Rucaka is a pillared porch, three parts wide and 2 parts deep The model Rucaka is a small temple without inner ambulatory It has no separate structure placed in front of its entrance, its Mandapa is a pillared porch only as it has been in the earlier temples Now, however, a large Mandapa or hall structure is placed contiguously in front of the more important temples[42] whether they are Nirandhāra or have an inner ambulatory (Figs on pp 255 f)

Plans (talacchanda) of some Sāndhāra Prāsādas are drawn here following the 'Samarānganasūtradhāra' The proportions of their elevations are also given

The proportions of the base however are most elaborately dealt with in the South Indian Śāstras and such chapters of the general treatises which deal with the South Indian temples (see infra)

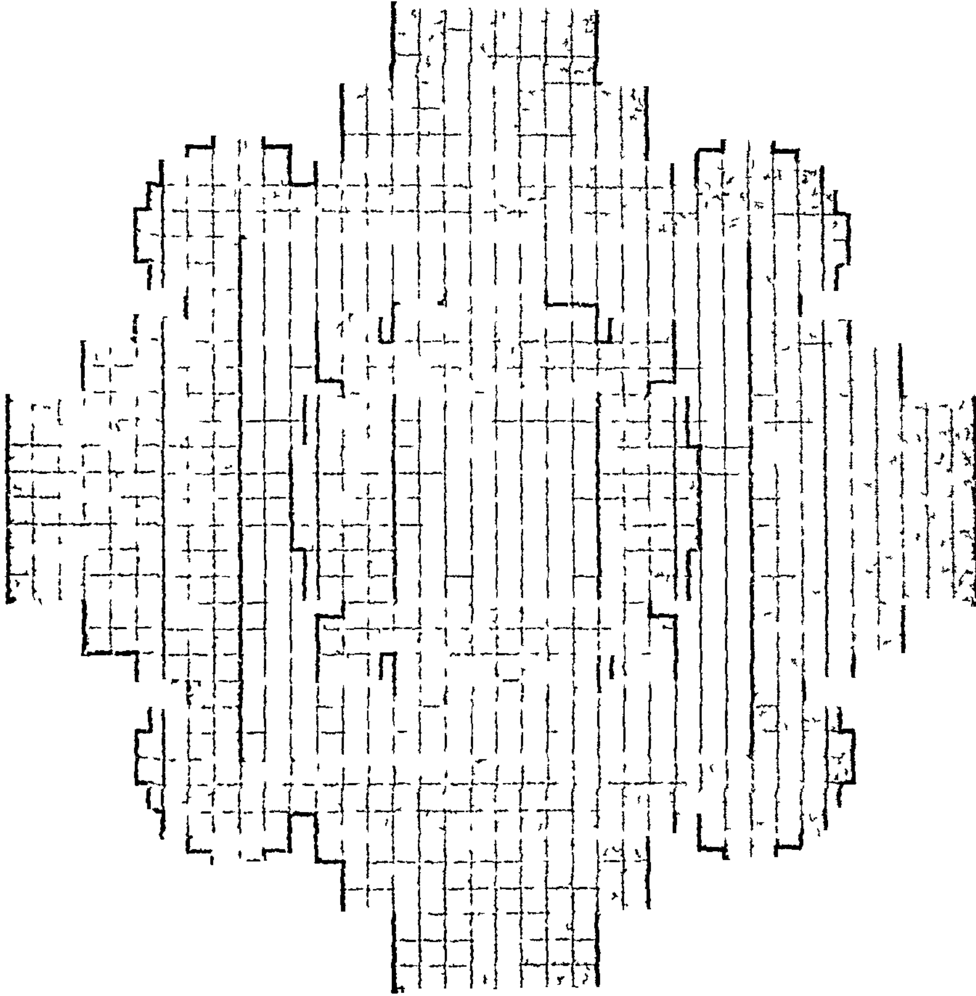
Two approximate drawings showing the profiles of the Adhisthāna and Vedikā (from ASI Rep vol VII, Pl XII and vol VIII Pl VII) of the Laksmana Temple in Khajuraho and the Nīlakanthesvara Temple in Udayapur (Pl XLII) are given on p 259 f The names of the mouldings, etc are added following their descriptions in the 'Samarānganasūtradhāra' ch LXI dealing with the 5 kinds of bases (pītha) of 'Drāvida Temples', Śilparatna', ch XIX (on Adhisthāna, 'Vāstu vidyā', ch IX, and other South Indian texts) —Partly the same, but also different names are used in other localities, cf Burgess-Cousens, 'Architectural Antiquities of Northern Gujerat' and N K Bose, 'Canons of Orissan Architecture' In the latter work (and also by M M Ganguly, op cit) attempts have been made to measure the proportions of the extant temples

[41] S S LVII, 25-26 describes the mouldings of the Vedibandha as Kumbha 4/9, Masūraka 2/9, Antarapatra 1/9 of its height

LVII 61-67, divides the Vedibandha differently, not into 9 but into seven parts, of these Kumbha has 3½ parts, Kalasa 1½, Antarapatra ½ and Kapotālī 1½ parts

[42] In the 'Hall temples', described in the 'Samarānganasūtradhāra', of which however few buildings such as the Lad Khan Temple in Aihole and several temples at Alampur (Raichur), Hyderabad, have survived, there was no need of a separate Mandapa or hall adjoining it

The temple Hemakūṭa, the abode of Śiva and the Vidhyādharas, is here reconstructed from the Talacchanda (p 247) and the Ūrdhvacchanda given in ch LVII 50-86, and translated below



Prāsāda Hemakūṭa (S S LVII 50 80)

"In a square field, (each side) being divided into 26 parts, six of these parts are assigned to each corner (karṇa), the Śālā, the hall-like projection in the middle of each side, extends (āyama) over 12 parts and projects (nirgama) 3 parts on all the four sides of the square Thence there is a further projection, it has a width of eight parts and its offset measures once more 3 parts 4 four-sided pillars (should be there) in the four directions [these are not indicated in the drawing] The interval between Karna, the corner portion, and the Śālā has a width (vistāra) of one part, there the vertical chase (jalāntara) has a recess (praveśa) of one part

The angle or edge itself (kona) of the corner portion (karna) is assigned one part and next to it is a minor offset or lateral bay (pratyanga), one part wide and

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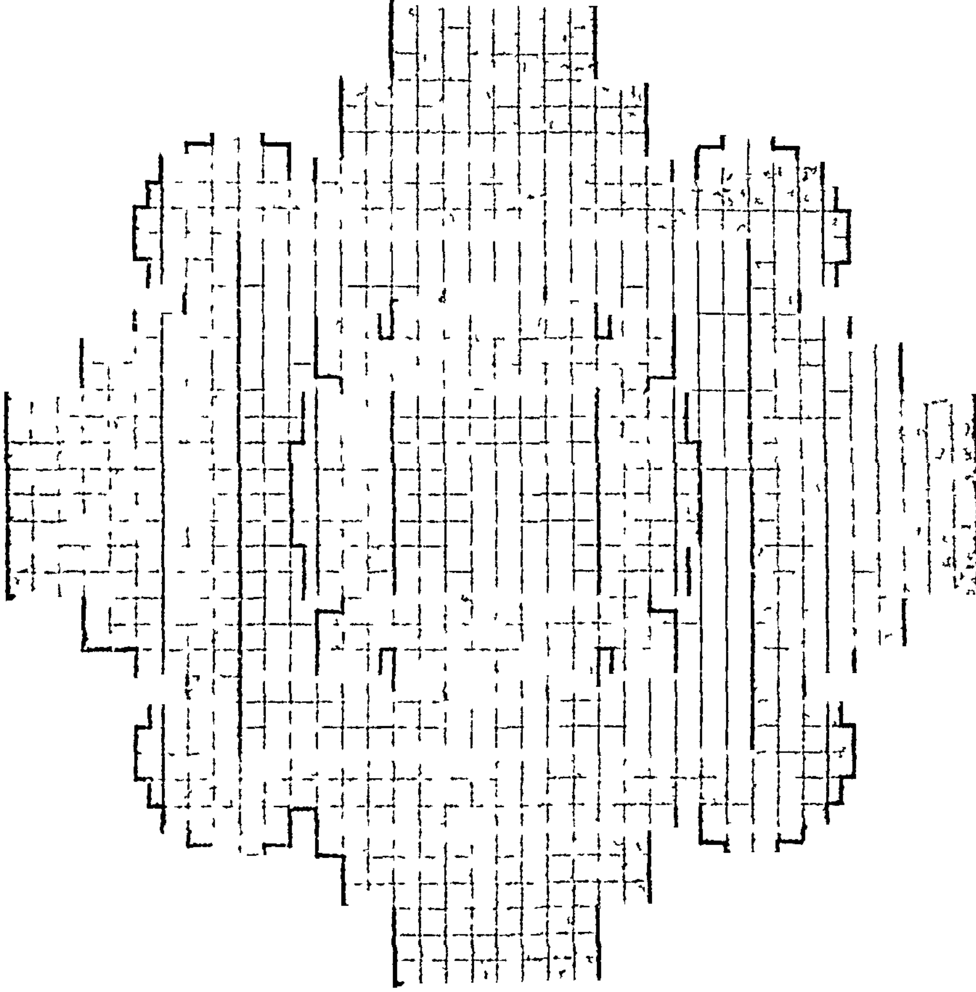
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The angle or edge itself (kona) of the corner portion (karna) is assigned one part and next to it is a minor offset or lateral bay (pratyanga), one part wide and

projecting half a part, it is next to a further projected part (rathikā) which is two parts wide and has a projection of one (further) half part [it forms the middle buttress (bhadra) of the corner portion] and is flanked on its other side by a Pratyanga, equal to the first These are the proportions in the four Karnas In thickness the outer wall (bāhya bhitti) measures three parts

The Garbha has an area of 64 parts and the wall of the Garbha is three parts thick (Here) the Karna, including the water-path, extends over three parts, the chase (vārimārga) measures one half part in width, its depth (praveśa) being one part The Śālā, the broad, central buttress, extends over 8 parts, and has a projection of half a part Thence the Bhadra which has a width of four parts, projects one half part further" (verses 50-59)

The drawing of this 'rhythmic disposition' of the floor, the Talacchanda or ground plan, shows the powerful projection of the central part of the wall, while the corners are elaborated as flattened polygonal buttresses, they connect as much as they hold apart the four faces of the temple An analysis of the rhythmical cadences of the outline is not given anywhere, it would fall into the sphere of aesthetics and could be correctly undertaken when a large number of temples would be drawn in plan and their vertical sections reconstructed

Walls set up on this plan with bold projections and deep recesses are rich in mouldings The lowermost part which extends to about one third of their height is the Vedibandha with its theme of horizontal mouldings of different curvature and height Above it rises the 'pillar' (jaṅghā) or the recessed part of the wall Then follows, as usual, the crowning portion of horizontal mouldings

The Vedibandha is assigned a height of 7 parts, of the module, which is the width of the Prāsāda having 26 parts The seven parts of the Vedibandha are distributed following the Ūrdhvacchanda or vertical rhythm ½ 1½ ½ 1½ which are the respective heights of the moulding Kumbhaka, a torus, the moulding Kalasa which has the profile of a vase, the recessed fillet Antarapatra and the roll cornice moulding Kapótālī

The middle portion of the wall which is called Jaṅghā, after the height of the shaft of the pillar, has 10 parts, in the 5 parts of the crowning mouldings above it, the Bharana portion, corresponding to the capital of the pillar, has 2 parts while the cornice moulding Mekhalā and the recessed fillet, Antarapatra, have 3 parts to themselves (S S LVII 62-65) These vertical rhythms are vibrant with the tensions of the various curves of their profiles, the vertical walls, by their structure, appear as if in a continuous movement, they project and recede, thus they carry to every corner the repercussions of the impact which has placed them on the perimeter of the Prāsāda Each facet is a world of its own, presided over by its own Regent or image Though it is complete in itself it is not isolated, for the profile of the next facet, and more than one corner at a time, contribute, from various angles, their identical themes Reinforced by such varied repetition, the superstructure rises from several points, in several shapes at a time They are gathered in the ascent of the Śikhara (cf Pls III, XLIII, LXXI) [43]

[43] The above Plates and those referred to subsequently in this chapter correspond, each in some respect to the particulars of the S S

The corners of the superstructure are fortified by small Śikharas of their own, the Karnaśikharas (cf Pls I, III, IV) In each corner a Karnaśikhara is set up with a width of 6 parts thus carrying the theme of the Karna which also is 6 parts wide, from the vertical wall below, into the superstructure The Karnaśikhara is a replica, on a smaller scale, of the central and main Śikhara, the Mūlamañjarī Against each of the 4 curvilinear faces of the 'Root' Mañjarī (mūla-mañjarī) and the corner Mañjarīs leans an Uromañjarī, its name says that it leans on the 'chest' of its Mañjarī An Uromañjarī is a vertical section of a Mañjarī, it is lower than the trunk of its Mañjarī having the height of its chest only, and represents a replica in the shape of an offset Its width, on the Karna-Mañjarī, is given as 4 parts Like its Mañjarī, it is complete with a neck (grīvā), Āmalaka and a finial consisting of Candrikā and Kalaśa While the Karnas have their continuity in the superstructure in the Karnaśikharas, the Ālinda, the balcony or furthermost central projection in the middle of each side, has its corresponding form in the Śukanāsā or Simhakarna, the large 'face stone' in the superstructure Its width, like that of the Ālinda itself, is equal to the width of the Garbhagrha, its height has six parts [44] The interval between Karnamañjarī and the Simhakarnas is filled by minor or 'lateral' forms (pratyanga) carved with figures such as Kinnaras, etc Tilakas, moreover, or Mañjarīs, as small as a 'sesamum seed' (tila), and small Kūtas are placed as lesser accents on the total volume of the Śikhara

Above this variegated 'socle' of the superstructure rise the curves of the Mūlamañjarī, its ascent is prepared by an Uromañjarikā half of whose height lies behind the Simhakarna It is broader than the Simhakarna so that the latter has the position of an antefix This Uromañjarī of the main Śikhara, the Mūlamañjarī, is 12 parts wide at the base, its Skandha or shoulder course has seven parts, the parts above it are, as usual, the neck (grīvā), Andaka, Candrikā and finally an Ākāśa-linga, instead of a Kalaśa Its height is given as two parts Now the final Mañjarī emerges from its sheaths, the Uromañjarīs, to a height of 21 parts from its base of 20 parts which covers the Garbhagrha with its walls (the Kandabhittis) and the Andhakārikā or Bhramani, the inner circumambulatory

The root-Mañjarī has five Bhūmis, storeys or levels, of which the first is 5 parts high and each subsequent storey is lower by half a part than the preceding one The shoulder course, Skandha, being only 12 parts broad is one part high Above the shoulder course are the obligatory parts, the Andaka is very broad, 11 parts out of the 12 of the Skandha, and above it, slightly smaller is the Dandikā, whose diameter has 9 parts, Dandikā appears here as the name of the second Anda which is frequent on temples in the middle region of India of the tenth century

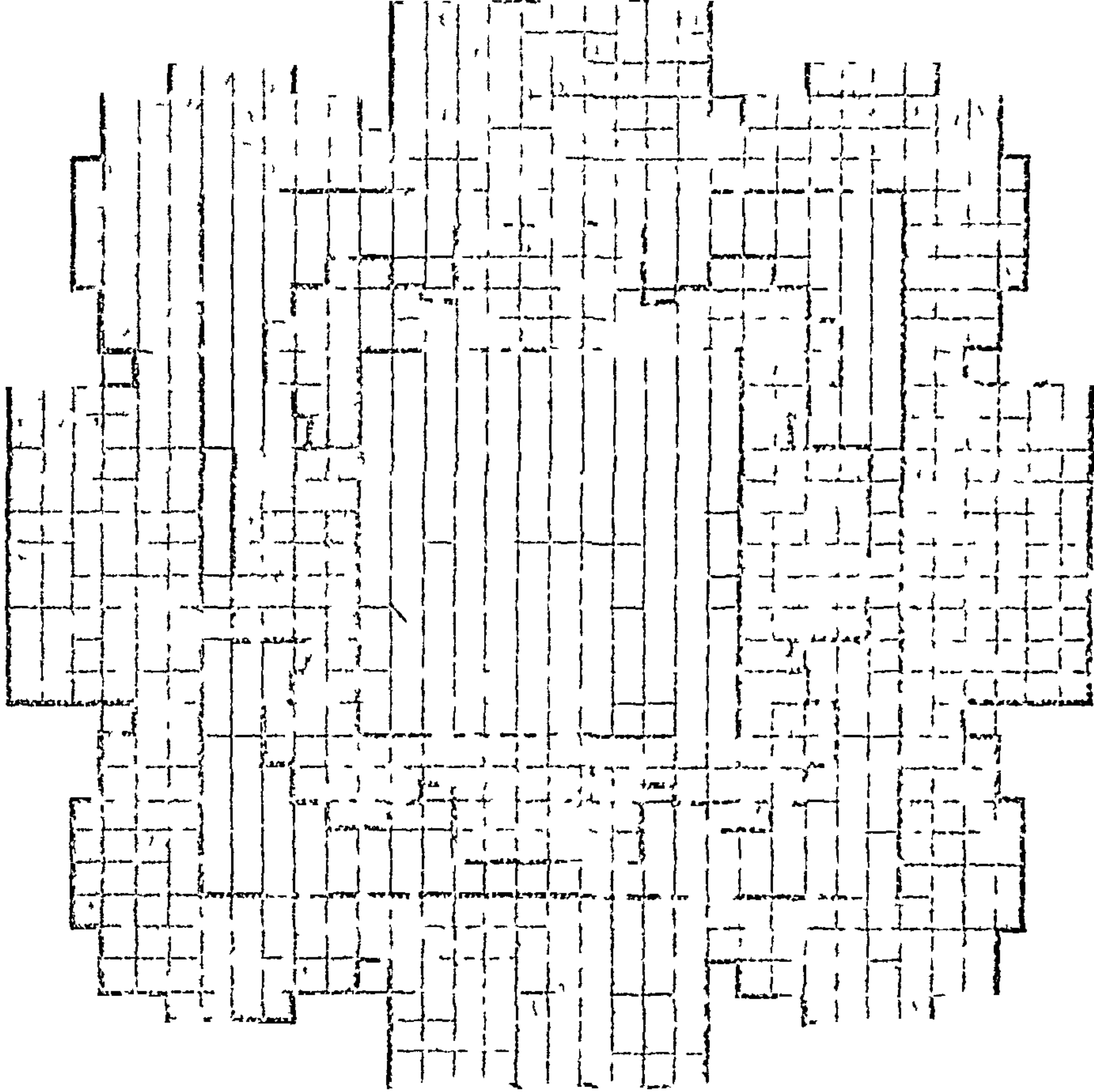
Thus the Prāsāda Hemakūta attains its total height of 53 parts, it is one part higher than twice the 26 parts of its basic line and module [45]

The Prāsāda Vijayabhadra (S S LVII 173-180) can also be reconstructed from its plan Its Śilās, contrary to the general use are not equal to the width of the Garbhagrha, but are narrower, the vertical drain (jalāntara) supplements the

[44] Its base lies above the Karnaśikharas, in height it occupies 6 out of the 13 parts of the Uromañjarikā

[45] Five Latās (called Pāga, in Orissa) further differentiate the Śikhara Latā, in the S S, designates an offset or 'buttress' of the Śikhara (LVII 197)

required width [46] In the plan of the Hemakūṭa, only the second Ālinda or Śālā had the width of the Garbhagṛha, in this way the buttresses and recesses are balanced and based on the knowledge of an optimum proportion In this Prāsāda



Prāsāda Vijayabhadra (S S LVII 173-180)

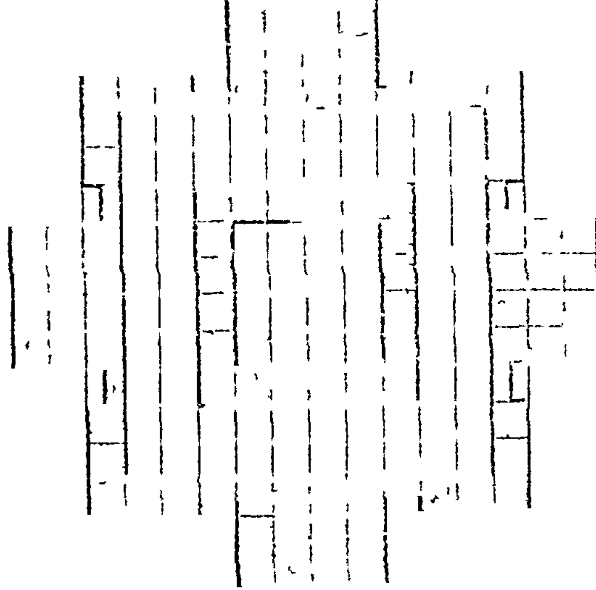
of 28 parts, the height is given as twice the width plus two Kalās, the neck (grīvā), the Aṇḍa or Āmalasāraka being outside this measure

The text gives 16 as the measurement or width of this Prāsāda Sixteen however is the outer side of the wall of the Garbhagṛha, the Antarabhitti, in this

[46] The depth of the recess of the water-course (ambumārga) and the Kaṇḍabhitti or wall of the Garbhagṛha, is not given in the text, verse 179 being corrupt It is assumed to have half a part The ambulatory appears in the plan as 1 part wide in the middle of each side, the Śālās, however, are not massive but form balconies so that in the actual building the ambulatory is wider, in the middle of each side, than appears in the plan

Sāndhāra-prāsāda, this is the proportionate measure of the wall of the Prāsāda proper, the length of the Bāhyabhitti, the outer wall is 28, the height of the vertical walls of the Prāsāda is given as 24, thus forming a prism lower than a cube The height, expressed as that of the Tulā or the architrave, is composed of the Vedibandha, the base mouldings, which occupy 7 parts, the Jaṅghā or wall proper of 12 parts, and the crowning mouldings which have 5 parts [47]

The vertical walls of a Nirandhāra Prāsāda, like the Rucaka, may be higher than the measurement of its width, in a Sāndhāra Prāsāda they may be lower



Prāsāda Kṣitibhūṣana (S S LVII 760-80)

The ground plan of the Prāsāda Ksitibhūsana (S S LVII 760-80) is of particular interest The height of the Tulā has 10 parts, two parts less than its width, its superstructure has 15 parts which are divided into five storeys, the lowermost has 3½ parts, the second 3¼ and each successive storey is by ¼ part lower than the preceding The height of the portion of the superstructure, above the shoulder course, is here called Śīrsa, the head, and it measures ½ part, so that the height of the Prāsāda Ksitibhūsana is 25½ parts The Śīrsa above the Skandha may have one of several shapes The Prāsāda Ksitibhūsana is one of those Prāsādas which can be built as "Drāvida, Nāgara or Varāta" [48]

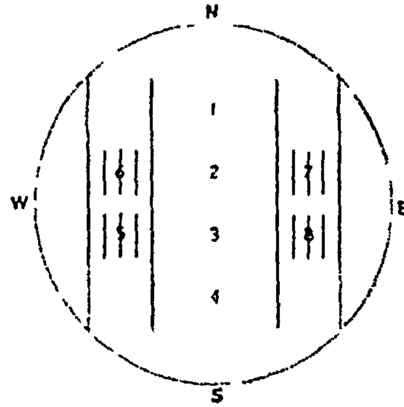
It is a non-committal plan, a Drāvida Prāsāda (Fig on p 257) is thus laid out, in principle, as a rule further offsets are placed between the central, main projection,

[47] The Vedibandha here is composed of a Kumbhaka which occupies 3 parts, Masūraka 1½, Antarapatra 1 and Mekhalā 1½ parts The crowning mouldings above the Jaṅghā have here a Galapaṭṭikā of 2 parts, Andhārikā ½, Varandikā 1½ and Antarapatra of one part

[48] Drāvida, Nāgara and Varāṭa, as also Nāgara, Drāvida and Vesara are dealt with in a separate following chapter

structure The nomenclature of the temples, according to their superstructure is dealt with in a subsequent chapter of Part VII South Indian texts and the chapters LXI and LXII of the 'Samarāṅganasūtradhāra', which have the Drāvida Prāsāda for their subject, have their own norms and nomenclature

The architectural rhythms of the Hindu temple impart to each building its consistency and wholeness They evoke in the devotee (bhakta) an adjustment of his person to its structure, his subtle body (sūksma sarīra) responds to the proportions of the temple by an inner rhythmical movement By this "aesthetic" emotion the devotee is one with the temple, and qualified to realize the presence of God




Central Part of the Gārhapatya Agni
(Ś B VII 1 1 18, Part II note 19)

## PROPORTIONS OF THE MANDAPA

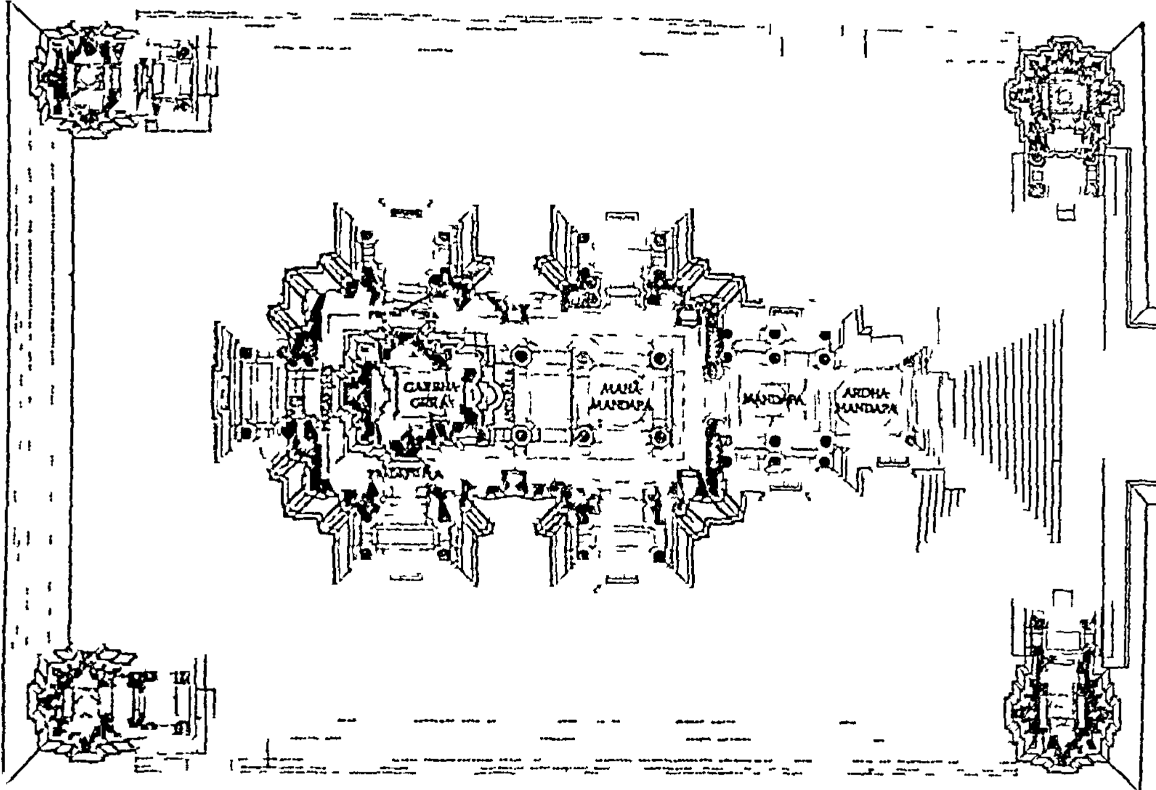
The Prāsāda at all times is the temple proper The other structures which are combined with it are subservient to it This is expressed in their proportions which are based on those of the Prāsāda By proportionate measures and the theme of its walls and not only by propinquity, contiguousness or coalescence with the building of the Prāsāda is the Mandapa part of the temple At first, however, in some of the earlier temples, having a Mandapa structure, it was added to the Prāsāda after the construction of the latter The Mandapa of the Parasurāmesvar temple in Bhuvanesvar is the result of such an afterthought, its squat shape with its clerestory roof appears shunted on to the wall of the Prāsāda which prior to this combination had been carved in every detail But it is not only as an afterthought, as in this particular case, that the Mandapas of some of the earlier Prāsādas give no rhythmical response to the theme of the Prāsāda, they offer an unmitigated contrast The Uttaresvar temple at Bhuvanesvar, whose Mandapa and Prāsāda were planned and set up at the same time and are contemporary with the Parasurāmesvar temple shows the problem which confronted the Sthapati [49] A century or more had to pass before he arrived at the perfect solutions showing the Prāsāda as the main building and temple proper, with the Mandapa as the lesser part of the sacred structure, following its rhythm in the particularities of its own form In Orissan temples the integrity of the two buildings is more strongly retained than elsewhere, but even there one wall surrounds their continuity and only indicates their separateness by a deeper recess than any produced by the buttresses of the wall of the two structures Within this juncture (samsrti, S S LXVI 17) lies the porch (antarāla) of the Prāsāda or Garbhagrha, fulfilling the function of the Mukhamandapa of the more ancient temples This small porch is marked on the outside of the Prāsāda (Pls XLVIII, XLIX, cf also Figs on pp 255-56) by a buttress carried on to the Śukanāsī, at the prescribed height which regulates the height of the Mandapa

The superstructure of the Mandapa must not exceed in height the Śukanāsī of the Prāsāda (S S LXVII 102, 110) The Śukanāsā, however, at different periods and in the various types of temples itself varies from having half the height of the Śikhara to a less 'perfect' proportion While thus the height of the Mandapa depends upon the height of the temple and its Śukanāsī, its proportion is not a fixed one, in plan however the centre of the Mandapa is in a fixed proportion to the Garbhagrha, its central square has the same area (S S LXVII 43) [50] This

[49] By building instead of the 'clerestory' "dvichādya" roof of the Jagamohan (cf also the Vaital Deul, Bhuvanesvar), a "trichādya" roof is on the Jagamohan of the Simhanātha Temple at Baramba, Cuttack, the Jagamohan is seen to rise towards the shape it was to be given in subsequent ages, as Pīḍhā Deul, having a pyramidal superstructure composed of the roofs of many storeys

[50] In a Nirandhāra Prāsāda (Fig , p 230A, Ambarnāth) this square is the Garbhagrha proper In a Sāndhāra Prāsāda (Fig , p 255, Khajuraho) it is the Garbhagrha with Kanda (or Antarabhitti), the area of the square in this instance is measured from the outer corners of

central space is marked as a rule by four pillars, forming a Catuskī, a pavilion, whose pillars, by underpinning, help to support the roof or dome The inter-columnia of the central square have the maximum measurement The other pillars




PLAN OF LAKṢMAṆA TEMPLE (954 A D), Khajuraho

The complete correlation of Prāsāda and Maṇḍapa (Mahāmandapa) is seen by the walls of this Sāndhāra temple comprising within one rectangular space, the Garbhagrha with its own or internal wall (antara bhitti), porch (antarāla) and ambulatory, as well as the Mahāmandapa with its four central pillars These lie in one line with the respective pillars of the Antarāla and the lateral walls of the Garbhagrha , and furthermore with the pillars of the balcony of the ambulatory behind the Garbhagrha, in one direction, and with the internal pillars of Maṇḍapa and Ardha-Maṇḍapa in the opposite direction

The transepts are formed by the lateral balconies of the ambulatory (pradakṣina) and by those of the Mahāmandapa The Talacchanda, the rhythm of this unified plan, is akin to those of the schematic plans (pp 250, etc ) drawn following the 'Samarāṅganasūtradhāra"

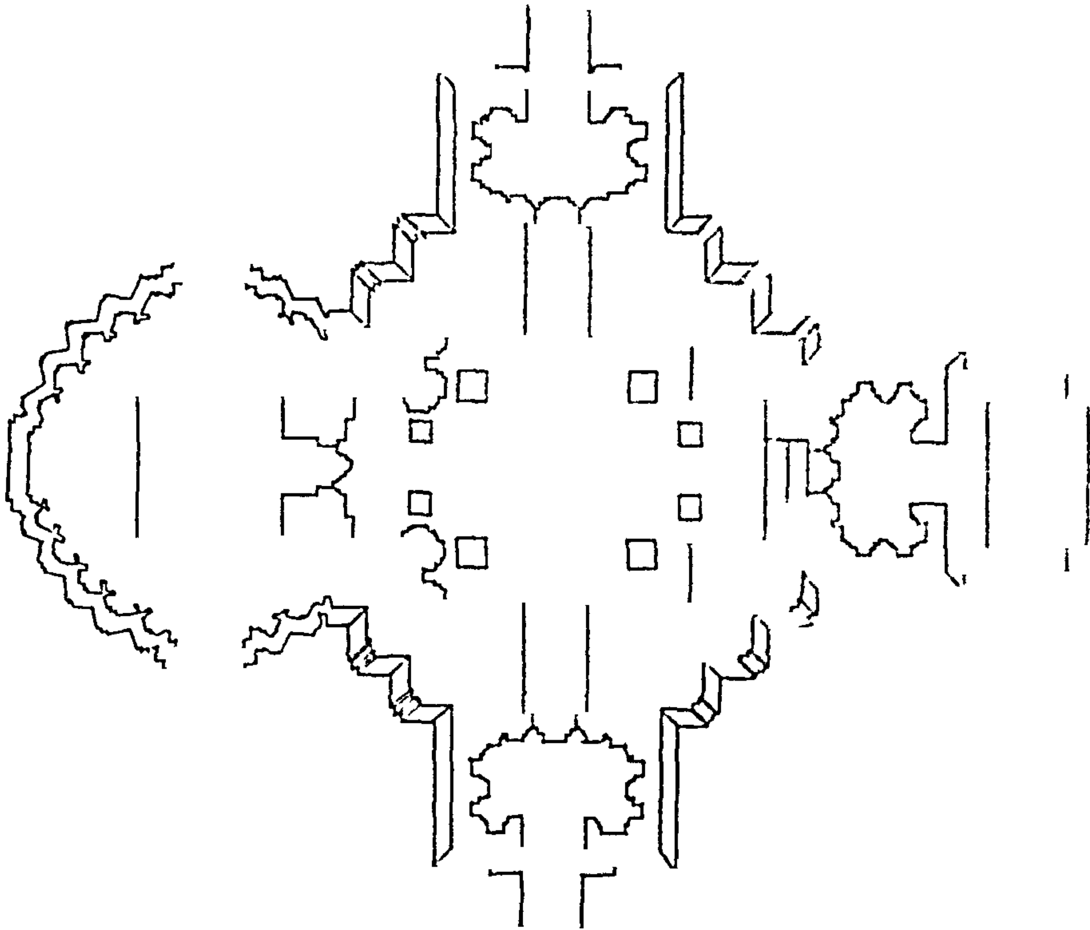
The Lakṣmaṇa Temple is a 'pañcāyatana' temple four subsidiary shrines are placed in the corners of its high terrace , they are connected by a high stone bench with a sloped back which acts as parapet The two small shrines near the steps face inward, the two of the back face outward, so that all the five temples open their doors to the devotee who has ascended the terrace

The main buttresses or graded planes of the exterior of the temple are indicated in projection (cf B L Dhama, op cit Pl III)

the pillars, whereas in the Nīlakaṇṭhesvara Temple in Udayapur (Fig , p 256) it is to be measured from the inner corners of the pillars

are placed at equal distances from each other, in aliquot parts, and originally, half of the intercolumnia in the centre 64 pillars is then maximum number in the Puspaka Mandapa (S S LXVII 12) The significance of this number has its base in the number of squares of the Mandūka-Mandala

The Mandapa is either square or rectangular It should have the width of the Prāsāda (S S LXVII 98, Fig on p 255) or its width is equal to the height or diagonal of the Prāsāda (S S LXVI 8) These are the most perfect proportions, or else it should be double—it has twice the width of the Prāsāda in the Udayapur Temple (below) or its length is 1¾ of the width of the Prāsāda [1] Any of these proportions may be chosen according to the available space (LXVII 10) and other



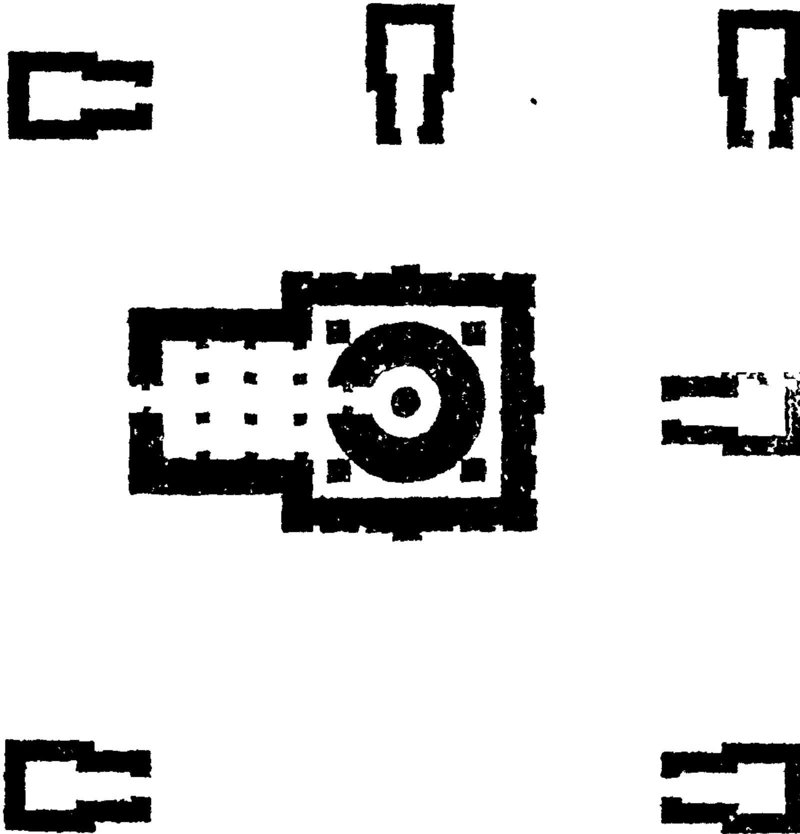
PLAN OF NĪLAKAṆṬHEŚVARA TEMPLE (1059—1080 A D)
Udayapur, Gowalior (Pls LII—III)
from Cunningham, ASR, vol VII Pl VI

The very substantial walls of this stellate Nirandhāra temple extend from its perimeter to the Garbhagrha and Mahāmaṇḍapa, etc as outlined in the plan In this type of temple, the buttresses project radiately, and not axially, as usual

[1] Various intermediate proportions are specified in the S S LXVII 1-4 In smaller temples, the Mandapa increases in size to 2¼ and 2½ of that of the Prāsāda

considerations "As is the Prāsāda, so is the Maṇḍapa in front of it" (ib 24)[11]
This applies to its walls and their theme

Walls however are dispensable in the Maṇḍapa, it is then an Ālīsa maṇḍapa (ib 23) such as are for example the Sabhā-maṇḍapas in Gujarat, these are ... tired



PLAN OF VIJAYĀLAYA COLĪSVARA TEMPLE ON MELAMALAI (Cola period)
Nārttamalai, Pudukkottai
From JISOA, vol V p 85

This Sāndhāra temple has a circular Garbhagṛha around the Linga, pillars in the ambulatory, the walls of the Maṇḍapa are without buttresses, those of the Prāsāda have the regularity which distinguishes South Indian Temples The Temple faces west

Six—originally seven—small shrines, each consisting of Prāsāda and Maṇḍapa are set around the main temple

[12] The pillars have their parts adjusted in height to the division of the perpendicular wall (Burgess Cousens, 'Architectural Antiquities of Northern Gujarat', op cit, p 24 Wall and pillars are one in nature, being perpendicular supports, they have the same name (jaṅghā), pillars are carved on the walls, the wall is either pillar or offset and, but for the interior of the Garbhagṛha, where as a rule, it is plain, it scarcely answers to the term wall as understood in architecture elsewhere and also in the earlier temples

Actual pillars on the other hand in extant medieval Hindu temples do not form part of the Prāsāda unless they support the roof of the balconies of Sāndhāra Prāsādas (Fig on p 255) Full pillars are an exception in the Prāsāda (Fig on p 257) They belong to the Maṇḍapa

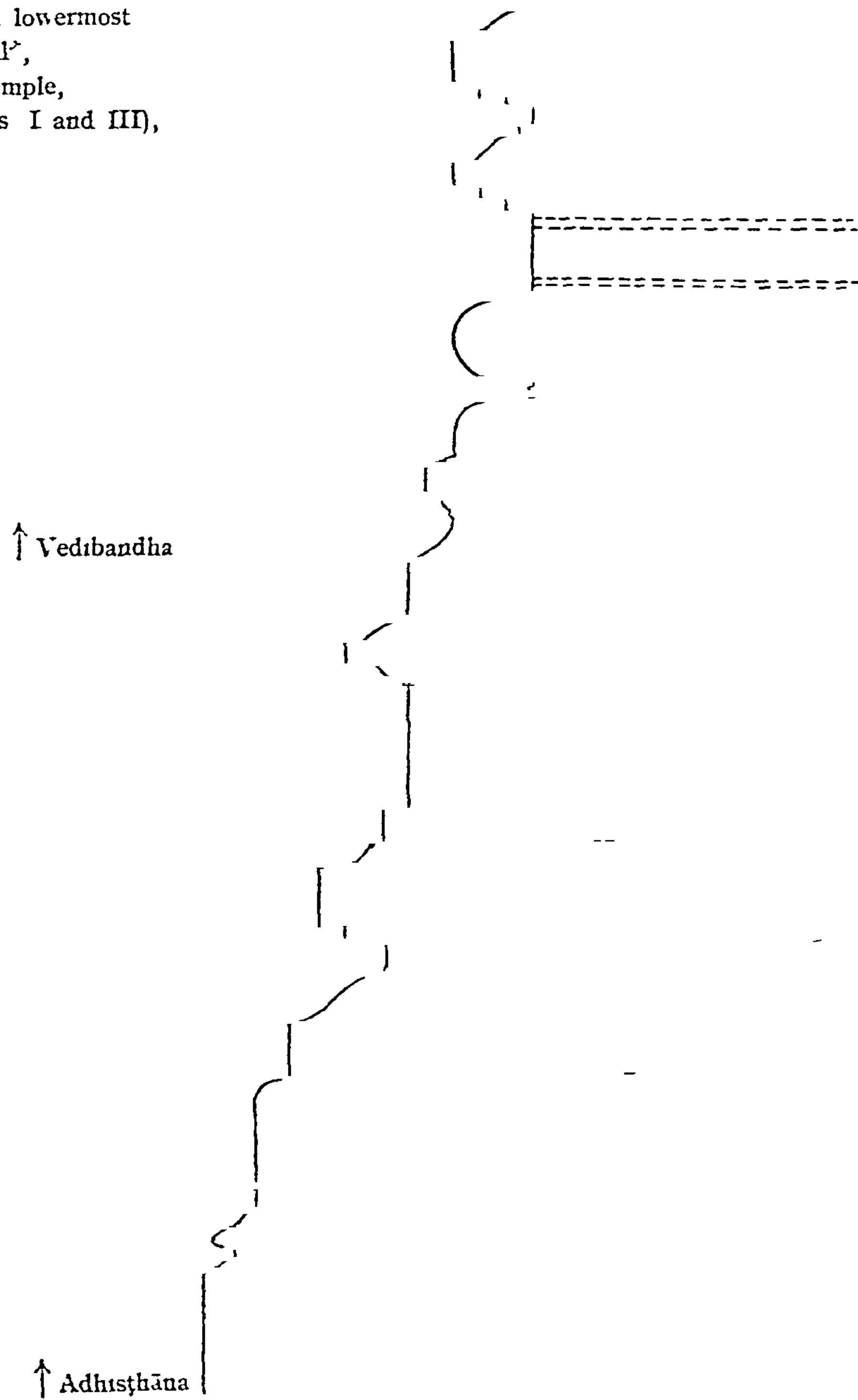
separate from the temple which comprises within its walls the Gūdha or "closed" Mandapa

The same themes, but varied in their proportionate application, link the Mandapa, built in one or the other of the 8 or 27 possible varieties, to the Prāsāda The entrance to the Mandapa may be equal in width to that of the Prāsāda, but exceeds its height by ¼, ⅓ or ½ (S S LXVI 20) or it should be 1½, 1⅔, 1¾ or twice the door of the Prāsāda (S S LXVII 97-98)

Within these margins of proportionate measurement the true Sthapati shows his mastermind in such temples like the one at Ambarnāth, its proportions corroborate and make use of the rules The distance for example from the square of the Garbhagrha to the Catuskikā, the central square of the Mandapa, is the diagonal of these congruous squares [53] So intimately moreover are the two structures locked into one building that in this temple the centre of the Garbhagrha is the corner of the square on edge, formed by connecting the angles of the offsets of the wall of the Mandapa (p 230A)

[53] The division of an area marked by pillars is measured from their outer corners, as a rule The Maṇḍapas of South Indian temples are classified according to the number of their pillars, the 4 pillared, 12, 16, 32 and 100 pillared Maṇḍapa have each their special name and those having more than 100 pillars are known as Viśāla (I P IV, XXXII 97-116, cf Fig on p 257) The synonyms for pillar are Sthāṇu, Sthūṇa, Pāda, Jaṅghā, Caraṇa, Aṅghrika, Stambha, Talpa and Kampa ('Mayamata', XV 2) The proportionate measurements of Maṇḍapa and Prāsāda, of the pillars and intercolumnia, are dealt with in the 'Īśānaśivagurudeva paddhati', l c

Profile of socle and lowermost
part of wall,
Laksmana Temple,
Khajuraho (cf also Pls I and III),
954 A D



Profile of socle and lowermost part of wall*, Nīlakaṇṭheśvara Temple, Udayapur, Gwalior (cf Pl XLIII), 1059 1080 A D

*The mouldings are

(a) rectilinear

Paṭṭikā (vājana), fillet
Gala (kaṇṭha, antari), recess
Kampa, a half-fillet or fascia between a
Paṭṭikā or any major moulding and a recess

(b) curvilinear

Kapota, Padma, etc, cyma
Kumuda, torus
Kumbha, half torus and fillet combined
Kanika, arris

re further synonyms and names of other mouldings, see notes 40, 41, 47

Vedibandha

Adhiṣṭhāna

The pure proportions of the earlier texts are, it has been shown, modified later A large body of Vāstuśāstras, moreover, which belongs to South India, testifies to a further departure from the correspondence between the proportions of the plan and the elevation of the temple None of the known sources of South Indian architecture is as ancient as the 'Bṛhat Saṃhitā' [54] In the 'Īśānaśivagurudeva-paddhati', compiled between the ninth and eleventh centuries, is the key to the complexities of the proportions of the South Indian temples They correspond to the complex nature of these types of temples

Size, in a South Indian temple is more than a quantity The different classes of the South Indian temples are distinguished partly by their size which in turn is connected with the simplicity or the complexity of their types The simplest or one storeyed small temple (alpa-prāsāda) has for its superstructure but another yet smaller shrine, complete with its perpendicular walls and cupola (Fig e, on p 185) The larger temples with many storeys show this superstructural temple raised to the top floor (Figs f-h), 16 floors being the maximum number, whereas each one of the lower storeys has its parapet of chapels In brief, the distinctions are not only between the Small Shrines (alpa-prāsāda) and the large, Main Temples (mukhya-prāsāda) but also and even more important, between the Alpa-prāsādas and the Jāti Vimānas Jāti means not only a special class (Jāti) of temples, a Jāti temple is a 'collective temple' which carries on its perpendicular walls the various classes of the shrines of the parapet It is their 'common denominator' [55] The 20 Main Temples (mukhya-prāsāda) dedicated to Śiva, Brahmā and Viṣṇu —are foremost amongst the Jāti Vimānas Second in the hierarchy of the Jāti Vimānas come the 32 Jātītara Prāsādas, dedicated to all the gods, and these are followed by the Jāti Vimānas of which twelve are for (worship by) Brāhmaṇas, 24 for Kṣatryas (kings) and 8 for Vaiśyas and Śūdras

The Alpa or Kṣudra-vimānas, the small shrines, are described as having from one to three or four storeys (Ī P III Ch XXX 18-21, 54-60) Their width ranges from 3 to 10 cubits (hasta) They have an inner ambulatory (madhya-nāḍikā) between double walls, or are with one set of walls only In the latter instance the area of the Garbhagṛha has 64 squares, while in the former it has 81, by the preservation of these numbers the South Indian temples prove themselves built on the Vāstu-maṇḍala The walls are relatively much thinner than in the temples of

[54] The relatively earlier datable sources as yet known are the 'Īśānaśivagurudevapaddhati' and the 'Samarāṅgaṇasūtradhāra', the latter gives two chapters to the Drāviḍa prāsāda, while the former deals with the architecture of the Drāviḍa-prāsāda only to the exclusion of other types The 'Vaikhānasāgama' is probably earlier and, on the whole, has been assigned a date not later than the eighth century A D Its author is Marīci , the architectural terms (śikhara, etc ) have their definite South Indian connotation —The 'Kāmikāgama' appears to be later than the 'Īśānaśivagurudevapaddhati' or of the same age

[55] The rendering of the architectural term 'Jāti Prāsāda' as 'collective temple' is based on the meaning of Jāti "reduction of fractions to a common denominator"

Chart I Instead of having a thickness of $\frac{1}{4}$ to $\frac{1}{6}$th of the width of the Prāsāda or of the Mūlasūtra they are assigned an eighth, ninth or tenth part only, or in a Sāndhāra shrine, the thickness of the outer wall is $\frac{1}{6}$th of the width of the Prāsāda, that of the inner wall $\frac{1}{8}$th of the Garbhagṛha ('Śilparatna', XX, 1-3) The proportions of the plan thus form a geometrical series when there are double walls, they form no series at all in the temple without ambulatory, which judging from the proportions of its plan is an afterthought introduced for the sake of the completeness of the 'small temple'

The vertical proportions are meted out with reference to the height It is a principle of the South Indian proportions that the total height of the temple is subdivided into a certain number of parts, each of these again is subdivided, the latter divisions are not directly referable to the division of the ground plan although the height itself is expressed in terms of the Mānasūtra [56]

The height is twice the width of an Alpa Prāsāda, being divided into 8 parts, four are assigned to the perpendicular walls and 4 to the superstructure, each of these main divisions of the Small Temple is subdivided three-fold, the perpendicular wall into its socle (adhiṣṭhāna), 'pillar' or wall surface proper (stambha) and entablature (prastara), the superstructure of the one-storeyed Alpa-prāsāda analogously has the following three parts its Neck (kaṇṭha), the Śikhara, and the Stūpi, above the Śikhara These 6 portions follow in the vertical direction the rhythm 1 2 1, 1 2 1, this is how the 8 parts of the height are meted out

[56] This applies also to the proportions of the wall or pillar and door Their total height is commensurate to their width

The pillar is higher than the door by 1/7th, 1/8th or 1/9th of its own height and the width of the door remains, as in the earliest texts, half of its own height ('Śilparatna' XXII 3) See note 10, Part VII

[57] The (solid) dome shaped roof or cupola is called Śikhara in South Indian Vāstuśāstra (Ī P IV XXXII 67-68) Eight kinds of Śikharas are distinguished according to their section (śiraschanda) or 'plan' square, rectangular, circular, elliptical, of Śālā shape, the 6 sided, the 8 sided and the 16 sided ('caturaśra, āyatāśra, vṛtta, vṛttāyata, śālākāra, ṣaḍaśra, aṣṭāsra, ṣoḍaśāśra') These Śikharas, moreover, fall into seven different classes according to their relative height The names of these seven classes are Kālinga, Kāsva, Varāṭa, Ullāla, Śaundika, Kāsmīra and Gāngeya (verse 71)

The 'Mayamata', XVIII 8-10, too knows 8 classes of these Śikharas and gives the proportionate height as 2/5, 3/7, 4/9, 5/11, 6/13, 7/15, 8/17, and ½ of the width of the chapel Kaṇṭha (neck) stands for 'bhitti', the wall of each, the generally accepted height of the cupola or Śikhara being ½ of the width of the chapel

The respective names of the 8 classes are in the 'Mayamata' Pāñcāla, Vaideha, Māgadha, Kaurava, Kausala, Śaurasena, Gāndhāra and Āvantika These, however, are names of the Lupās (rafters) in the Ī P, whereas the names of the eight classes of the Lupās in the 'Mayamata' are 'Vyāmisra, Kalinga, Kausika, Varāṭa, Drāvida, Barbara, Kollaka and Saundika (XVIII 13-14)

These names refer to countries and seem to suggest that the various proportions of the dome originated in the various parts of India Their series however are interchanged in the two texts, with those of the rafters (lupā) The name Varāṭa is common to both the texts, Drāviḍa occurs in the 'Mayamata' only The various proportionate heights from 2/5 to ½ are named after regions of India from Kashmir in the North west to Kalinga (Orissa) in the East Varāṭa (Berar) as the name of a region is familiar to Vāstuśāstra The naming and classification of certain properties of the dome shape after various parts of India is a characteristic of South Indian texts, cf chapter on 'Nāgara, Drāviḍa, Vesara'

The triple sub-division is absent from the majority of the proportions of Chart I The socle there is not specifically assigned a definite height [58]

The triple division of the perpendicular portion is necessary in view of the special kind of superstructure which is a complete shrine, its walls now form the neck (grīvā) of the Śikhara, its dome shaped roof, on which is placed the finial (stūpi)

Alpa-Vimāna acc to 'Īśānaśivagurudevapaddhati'
Pt III ch XXX 54-59

| | | A without ambulatory | B with ambulatory | |
|---|---|---|---|---|
| Proportions of the Plan | Width of the Vimāna (mānasūtra) | W=10x | W=9x | |
| | Width of the Garbhagrha | 4/5W=8x | W/3=3x | |
| | Thickness of wall | W/10= x | W/9= x | |
| | Thickness of outer wall | | do | |
| | Width of ambulatory (madhya nāḍikā) | | do | |
| Proportionate Vertical measures | Height of socle (adhiṣṭhāna) | W/4=5x/2 | W/4=9x/4 | 1 part |
| | Pillar (stambha) or wall | W/2=5x | W/2=9x/2 | 2 |
| | Entablature (prastara) | W/4=5x/2 | W/4=9x/4 | 1 |
| | Neck (kaṇṭha) | W/4 | W/4 | 1 |
| | Śikhara | W/2 | W/2 | 2 |
| | Stūpi | W/4 | W/4 | 1 |
| Height of Vimāna | | 2W=20x | 2W=18x | 8 parts |

According to their size, there are 3 varieties of 'small shrines' The foremost has indeed a height twice its width, whereas the height of the lesser varieties is given as 1 6/7 W or 1½ W for the mean and the least kind (verses 52-53, ib )

The width of the Garbhagrha in a one storeyed temple is given in the 'Vaikhānasāgama' as 3/5, 4/7, 5/9, 6/11, 7/13, 8/15 or 9/17 of the width of the Prāsāda The 'Kāśyapaśilpa', XXVII, adds 1/3 or 1/2 to these possible proportions (slightly modified) and the 'Mānasāra' also follows them closely

Śikhara is the name of the dome shape, whether it crowns the High Temple (Harmya) of the Alpa-Vimāna, Jāti-Vimāna, or of any of the Anukāya angas (kūṭa, koṣṭha, etc ) of the latter The 'Mayamata', XVIII 16 enumerates, in addition to the shapes of the cupola in the I P, the following the 12 sided, the ripe Āmalaka shape, the lotus bud shape, and the globular dome Cf also 'Śilparatna', XXXII 1—17, for further specifications about the proportionate height of the Śikhara

[58] In Orissa, Pabhāga is the name of the lowermost zone of the wall (vedikā) with its horizontal mouldings, they have their specific names ('kumbha, kalasa', etc ), also in the temples of Gujarat Pābhāga, Janghā and Barandi ('Canons of Orissan Architecture', op cit pp 98-99), in the Orissan temple correspond in their proportions to those of the Adhiṣṭhāna, Stambha and Prastara of the South Indian Alpa-prāsāda With the addition of the Pītha, the actual socle, in an Orissan temple, however, the proportion changes from 1 2 1 to 2 2 1 Re the Pīṭha and Vedibandha, the socle and the series of mouldings at the bottom of the wall, see notes 40 and 41

The level of the floor of the Adhiṣṭhāna is either where the Janghā starts from or at a lower level where the mouldings of the Prati are (cf Mallayya, Studies, op cit, JAU, X p 113, commenting on T S I 11 17) This would be suitable in an Alpa prāsāda

The ideal height and proportions of an Alpa-prāsāda are given in the 'Īśānaśivagurudevapaddhati' The modifications of these perfect proportions are also classified Five possible kinds of proportionate measurement are generally admitted in the South Indian texts The height of the temple is divided into a certain number of parts and these are assigned to the base, wall and entablature, and to the three parts of the High Temple or the superstructure In Alpa-prāsādas, the height is divided into 6 or 8 parts, but also into 9, 10, 11 or 12 parts,[59] these are variously assigned to the four or six main horizontal divisions of the temple, each variety is given a name of its own, as shown in the chart below A divergence from the perfect type, "at peace" in its proportions (Śāntika), is, it appears, the rule The superstructure, moreover, in three out of the five varieties exceeds in height the lower 'half' of the building

The vertical proportions of one-storeyed South Indian Temples or Alpa-Vimānas, acc to 'Vaikhānasāgama', VI

| Number of equal divisions of the height | The Peaceful Śāntika 6 | 8 | The Successful Paustika 9 | The Joy-giver Jayada 10 | The Supernatural Adbhuta 11 | The All Desired Sarvakāmika 12 |
|---|---|---|---|---|---|---|
| | H=1 3/7W | | H=1½W | H=1¾W | H=2W | H=2⅛W |
| Adhisthāna | 1 | 1 | 1 | 1 | 1¼ | 1¼ |
| Stambha | 2 | 2 | 2½ | 2½ | 2⅓ | 2½ |
| Prastara | | 1 | 1 | 1 | 1 | 1¼ |
| Kantha | | 1 | 1¼ | 1½ | 1½ | 2¼ |
| Śikhara | 2 | 2 | 2¼ | 3 | 3½ | 2¼ |
| Stūpi | 1 | 1 | 1 | 1 | 1¼ | 1 |
| Vargas[60] | 4 | 6 | | | | |

The 'Vaikhānasagāma' allows from 1 3/7 to 2 ⅛ the width as the height of the Prāsāda The height of a South Indian temple does not, as a rule, exceed the double of the width of the Prāsāda this refers to small shrines whereas in large temples the height, as a rule, is 1 3/7 only of the Mānasūtra ('Īśānasivagurudevapaddhati') or it is equal to the diagonal of the square of the Mānasūtra The latter proportion is given in the 'Samarānganasūtradhāra'

[59] The height is subdivided in each of the above classes in a certain number of parts The number of these divisions is the greater the more storeys the Prāsāda has

[60] Instead of the—in a Drāvida building ('Kāmikāgama', XLIX 13)—usual six major sections (varga) the 'least' shrines have only four sections (varga) —The ratios ('Kāmikāgama', ch XLIX, 80-88), differ considerably from those of the 'Vaikhānasāgama'

In later Vāstu-sāstras, the proportions remain basically the same but further variations are conceded The 'Kāsyapasilpa', XXVII, 14 f, divides the height either into 8, 9 and 10 or also into 7, 15 and 16 equal parts and has three different proportions when the height is divided into 9 parts Two of these are 1, 2½, 1, 1¼, 2¼, 1 ,—as also in the 'Vaikhānasāgama ,—and the other 1, 2, 1, 1½, 2½, 1

The 'Mānasāra' XIX, also divides the height into 8, 10 and 12 parts, but also into 14, 16 and 32 parts

The generally five-fold classification of the South Indian temples according to their proportionate height applies not only to the Alpa-prāsādas, but also to the Jāti (and Mukhya) Vimānas While the height of the largest temples (Mukhya Prāsāda) is generally 1 3/7 parts of its width or equal to the diagonal of the square (ksetra) of the Prāsāda, there are several further variations, and their nomenclature *is not always the same in the different texts of which some are listed below*

The Proportion of Height and Width of a Drāvida Temple

| | Vaikhānas āgama VI | Īśānaśiva gurudeva paddhati, IV XXXI | Samarāṅ ganasūtra dhāra | Mayamata XI 8 9 | Kāśyapaśilpa XXIV 5-6 | Mānasāra XXXV 21 25 | Śilparatna XVI 7 9 Mayamata XIX 2 |
|---|---|---|---|---|---|---|---|
| Śāntika | H=1 3/7W | H=1 3/7W | | 1 3/7 | 1 4/5 | H= W | 1 3/7 |
| Pauṣṭika | H=1 1/2W | H=1 5/7W | | 1 3/6 | 1 5/6 | H=1¼W | 1 1/2 |
| Jayada | H=1 3/4W | H=1 6/7W | H=W√2 | 1 3/5 | 1 6/7 | H=1½W | 1 3/4 |
| Sarvakāmika | H=2 1/7W | | | 1 3/4 | 2 1/8 | H=1¾W | W |
| Adbhuta | H=2W | H=2W | | 2W | 2W | H=2 W | 2W |
| Abhicāra | | | | | | | 3/4W |

The Jāti-Vimānas too, can be relatively small temples, their width ranging from 7 to 23 Hastas, (Ī P III Ch XXX 13-14) They are however more than double the size of the Ksudra or Alpa-prāsāda these measure from 3 to 10 Hastas only

Jāti-Vimānas *are those* which *have for* their parapet and later for their 'enrichment' or completeness only, a row consisting of various miniature shrines, surrounding, as a rule, each of their several storeys The fully evolved South Indian temple may best be designated as "Jāti" or "Collective" Vimāna, the Mukhya Prāsāda comprises the largest temples, they too are Jāti-Vimānas in their composition (Fig h, Part VI)

The Jāti Vimānas, as a rule, top the list of four classes of temples, called Jāti, Chanda, Vikalpa and Ābhāsa [61] These four classes differ in the selection and the

[61] The Ī P, III ch XXX 1-18, assigns a definite number of storeys and width to each class

| | Storeys | Width in hastas |
|---|---|---|
| Jāti - Vimāna | 3—12 | 15—70 or also 7—23 |
| Chanda ,, | 5—12 | 17—63 |
| Vikalpa ,, | 5—12 | 13—55 |
| Ābhāsa ,, | 4—12 | 11—17 |
| Mukhya Prāsāda | 3—12 | 13—68 |
| Alpa Vimāna | 1— 4 | 3—10 |

arrangement of the miniature chapels and they are also prescribed to be each of definite height These distinctions however are secondary, all the four classes being Jāti Vimānas in principle

The height of the Collective or Jāti Vimānas (Sarvajāti) is severally given as twice the width whereas the Main (Mukhya) temples differ from the Jāti Vimānas inasmuch as their height is only 1 3/7 of their respective width The largest of these Main temples (Mukhya-prāsāda) in its maximum width has 70 hastas, the height of this 12 storeyed temple is 100 cubits [62]

The Jāti-Prāsāda has its plan laid out with the help of the Māna and Vinyāsa-sūtras Along the Mānasūtra, the width of the Garbhagrha measures from 1/3 to ½ and more of the width of the Prāsāda On the Vinyāsa-sūtras and to the Paryanta-sūtra the various buttresses project evenly and but little, only the central pier steps forth more boldly, the perpendicular walls of the Prāsāda, the prism or 'cube' which they form, is not impaired by these offsets, the many varied patterns of the plan and of the rhythms of the wall to which the northern Indian method led, are not part of the severe stereometry of the South Indian structure (Fig h on p 187 and Fig , p 257)

The buttresses of the Jāti-prāsāda are named after the respective miniature shrines (Kūta, Kostha, Pañjara, etc ) placed above them in the superstructure of the temple Buttress and recess (salilāntara, hārāntara) alternate and never does one offset project from another, the stereometry of the South Indian temple, its nearness to the 'cube' and the pyramid, are maintained by the discipline of these its 'lesser limbs' (anukāya) [63]

The method of proportionate measurement of the South Indian Prāsāda comprises A, (1) the proportions along the Mānasūtra, or the co-ordinates, (2) those between the Vinyāsasūtras in the first or ground floor and (3) in each of the subsequent storeys, all of these referring to the Talacchanda, or the rhythms of the floor and B, the height which is divided into a certain number of parts The 4-storeyed temple may be taken as representative of the method which also applies to the most ambitious, the 16 storeyed temple, whose width (mānasūtra) is divided into 34 and whose height is divided into 202 parts

A one storeyed building, however, should have a width of 3, 5, 7, or 9 hastas A two-storeyed building of 12 or 13 hastas and a three storeyed building of 15 or 17 hastas With every storey above that, the width of the building should be increased by 5 hastas (III XXX 49-52) This is the general rule

The difference between Jāti, Chanda, Vikalpa and Ābhāsa in the selection and arrangement of the miniature shrines Kūṭa, Koṣṭha, Pañjara, etc , is formulated in I P The 'Kāmikāgama', XLV 7 , 19-20 , etc , 'Mayamata', XXII 77 f Jāti, Chanda, etc , in the 'Mānāsara , XI 103-4 , XXX 174-5, etc , do not refer to the varieties of architectural shapes but denote various measurements only

[62] 68 Hastas is the mean width of this largest Mukhya Prāsāda

[63] The graded planes of the perimeter, of the temples to the north of the Drāviḍa country, are unknown there In South India, a stereometric architectural body carries representational sculptures, whereas the other temples show a gradual conversion of monumental sculpture into its carved surfaces

## A "Rhythm of the Floors" of a 4 storeyed South Indian Temple according to 'Kāsyapasilpa', XXX [64]

I According to a division of the co-ordinates of the ground floor

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| I Mānasūtra | 12 | Garbhagṛha | 6 | Gṛhapiṇḍi* | 1 | Ālinda* | 1 | Hara*[65] | 1 |

II According to a division of the sides of each floor by Vaṃśasūtras

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 1st Floor | 8 | Karṇakūṭa* | 1 | Pañjara* | 1 | Koṣṭha | 2 | Harāntara* | the rest | |
| 2nd Floor | 8 | | 1 | " | 1 | " | 2 | " | " | |
| 3rd Floor | 6 | | 1 | " | 1 | " | 1 | " | " | |
| 4th Floor | 3 | | | | | | | | | |

The Mānasūtra, i e the co-ordinates of the square plan of the Prāsāda being divided here into 12 parts, the width of the Garbhagṛha is half of it, or 6 parts, its wall (gṛhapiṇḍi) has a thickness of one part, this is also the width of the inner ambulatory (ālinda), the outer wall (hara) has also a thickness of one part

The width of the Prāsāda is thus 12 parts, for the purpose of allotting to the piers or buttresses their proportionate part of the width of the Prāsāda the latter is now divided by the Vaṃśasūtras into 8 parts of which the buttress at the corner occupies 1 part, the 2nd buttress also 1 part and the one in the middle of the building has 2 parts Their names are those of the type of the chapel of the superstructure, placed on top of each pier respectively, the Karnakūṭa at the corner, etc (cf Fig h where however further elaborations of the Anukāyas are to be seen)

The reduction in width of the floors (bhūmi) of the superstructure is given by means of the Vaṃśasūtras

Similarly, the successive floors of the temples with a larger number of storeys are divided each into equal parts decreasing for example, by one part in a 10-storeyed temple, from 14 parts of the ground floor to 3 parts of the top floor, and by 2 parts in a 16 storeyed building, from 32 parts of the ground floor to 4 parts of the sixteenth floor

[64] Vocabulary Gṛhapiṇḍi, Ālinda and Hara are 'enclosures' of the Garbhagṛha, their width is given They correspond to the inner wall, ambulatory and outer wall respectively Karṇakūṭa is the Kūṭa near the corner, the chapel with a square plan Pañjara is another kind of chapel, Harāntara are the recesses intervening between the chapels, Koṣṭha is the rectangular chapel in the centre

Adhiṣṭhāna and Tala are synonyms for socle or base, Mañca and Prastara for entablature which here combines the role of 'socle' of the higher floor and 'entablature' of the lower floor, Caraṇa and Talipa for pillar, Kaṇṭha and Gala for neck, Śirṣaka and Śikhara for cupola and Stūpi as well as Śikhā for finial The Paryanta sūtra is not explicitly given in the 'Kāśyapaśilpa'

[65] The asterisk indicates that the respective parts of the building are symmetrical and have to be counted twice—the Gṛhapiṇḍi, etc —to either side of the Garbhagṛha, the Karṇakūṭa, etc to either side of the Koṣṭha The numbers given against each length are those of the parts into which the Mānasūtra is divided

B "Rhythms of the Elevation" of a 4 storeyed South Indian Temple [66]
acc to 'Kāsyapaśilpa'

| | | Śāntika Prāsāda Height 39 parts | | Pauṣṭika H 42 parts | Jayada H 50 parts | Adbhuta H 50 parts | Sarvakāmika H 50 parts |
|---|---|---|---|---|---|---|---|
| | Adhiṣṭhāna | 2½ | Tala | 3 | 3½ | 3½ | 3½ |
| Ground floor | Pillar | 5 | | 6 | 7 | 7 | 7 |
| | Mañca | 2½ | Prastara | 3 | 3 | 3½ | 3 |
| 2nd floor | Carana | 4¼ | Talipa | 5 | 6 | 6½ | 6½ |
| | Mañca | 2½ | Prastara | 3 | 3 | 3¾ | 3¾ |
| 3rd floor | Carana | 4¼ | Talipa | 4½ | 6 | 6 | 6½ |
| | Prastara | 2 | Mañca | 2½ | 3 | 3 | 3 |
| 4th floor | Carana | 4¼ | | 4½ | 5½ | 5½ | 5½ |
| | Mañca | 2½ | | 2 | 3½ | 2½ | 2¼ |
| The Crowning parts | Vedikā | 1 | | 1 | 1 | 1 | 1 |
| | Kanṭha | 2 | | 1½ | 2 | 2 | 2 |
| | Śirṣaka | 4½ | | 4 | 5 | 5 | 5 |
| The Finial | Stūpi | 2 | | 2 | 1½ | 2¼ | 1 |

Whereas, it has been stated already, the height of the Great Temples is 1 3/7 of their width in the 'Īśānasivagurudevapaddhati', it is the diagonal (karna) of the square of the plan in the 'Samarānganasūtradhāra' (LXII 1) where the various Bhūmis are expressed as parts of the height or the diagonal (S S LXII 207 212) The several storeys are divided into horizontal strata (stara) In a seven-storeyed temple for example, each storey having (*a*) its socle (pītha) or the corresponding lower part of the wall (vedi), (*b*) its pillar or wall space proper (janghā), and (*c*) entablature parapet (kūtaprastara), the respective height of each of the seven storeys is 9½, 7½, 6½, 5¾, 4¼, 4, 3, successively to which are added the cornice of the shoulder course (kapota), etc , and the 'bell' (ghantā) or dome-shape, etc The width of the seven-storeyed temple is given as 35 Hastas

Vertical Proportions of a 7 Storeyed Temple according to
'Samarānganasūtradhāra', LXII 183-191

| | | | |
|---|---|---|---|
| First Floor | Pītha | 3 | Hastas |
| | Janghā | 5 | ,, |
| | Kūtaprastara | 1½ | ,, |
| Second Floor | Vedikābandha | 2 | ,, |
| | 2nd Janghā | 4 | ,, |
| | Kūtaprastara | 1½ | ,, |
| Third Floor | Vedi | 1½ | ,, |
| | 3rd Janghā | 3½ | ,, |
| | Kūtaprastara | 1½ | ,, |

[66] The further sets of rhythms with the Māna and Paryantasūtra, each of 10 or 9 parts respectively, are given in XXX 36 f

| | | | |
|---|---|---|---|
| Fourth Floor | Vedi | 1¼ | Hastas |
| | 4th Janghā | 3 | ,, |
| | Kūtaprastara | 1½ | ,, |
| Fifth Floor | Vedikābandha | 1 | ,, |
| | 5th Janghā | 2 | ,, |
| | Kūtaprastara | 1¼ | ,, |
| Sixth Floor | Vedikā | 1 | ,, |
| | 6th Janghā | 1¾ | ,, |
| | Kūta | 1¼ | ,, |
| Seventh Floor | Vedi | ½ | ,, |
| | 7th Janghā | 1½ | ,, |
| | Kūtaprastara | 1 | ,, |
| | Kapota | 3 | ,, |
| | Ghantā with Padma and Śīrsa | 5½ | ,, |
| | The Total Height is | 49 | Hastas |

In a Prāsāda with the maximum number of 12 storeys their decrease in height is however differently spaced and this holds good also for each of the Prāsādas with a different number of storeys The width of a 12 storeyed temple being given as 67 Hastas in the 'Samarānganasūtradhāra' its height is given as 95 Hastas, of which the successive storeys have 14, 11, 10½, 10, 8½ 7½, 7, 6, 5, 4, 3, and 2½ Hastas, and the High Temple with its cupola or Śikhara—here called Ghantā, the bell shape with a height of 2 and 4 Hastas respectively make up the approximate length of the diagonal of the square of the Prāsāda, which is 67 Hastas wide The successive decrease of these pragmatic proportions does not yield any series

Ganya-māna, the proportionate vertical measurement of the height of the temple and of its component parts ('Mānasāra', XXVII 35) is elaborated in South Indian Vāstusāstras The several component parts, analogous to the height of the temple, are subdivided each into a number of sub-sections, strata or mouldings, entire chapters, in the various texts, treat for example of the sub-divisions and proportions of the Ādyanga, the socle (adhisthāna) only Whereas eight varieties of the socle, according to its profiles and their proportions, are recorded in the 'Vaikhānasāgama', VI, five varieties only are given in the 'Samarānganasūtradhāra', LXI, fourteen varieties are described in the 'Mayamata' XIV 38, and 'Śilparatna', XIX 1, twenty-two in the 'Kāśyapasilpa' and sixty-four different kinds of Adhisthāna under 19 classes in the 'Mānasāra', XIV 10-372 [67] When

[67] The chronological sequence of South Indian Vāstusāstras is approximately 'Vaikhānasāgama', 'Mayamata', 'Īsānasivagurudevapaddhati', 'Kāmikāgama' (note 54) The Tantrasamuccaya' belongs to the early part of the 15th century (Mallayya, op cit JAU vol XII No 1 p ii)

While the 'Kāsyapasilpa'='Amsumadbheda' of Kāsyapa and 'Prayogamañjari' are prior to the 15th century (ib p III), the 'Śilparatna' dates from the later part of the 16th century

The 'Mānasāra' has been assigned, by P K Acharya, a place close to the 'Brhat Saṃhitā' and 'Matsyapurāna' ('Architecture of Mānasāra', p LIX, LVIII) The 'Mānasāra' has

the great Vimānas of South India were built meticulous 'case-laws' of the many possible proportions based on the norm were classified in Vāstu-śāstra

nothing in common with these treatises on the science of architecture and represents a different school, i e that of South India exclusively

The word 'Mānasāra' is also not to be found in the 'Agnipurāṇa', where the Āmalasāraka has been mistaken by P K Acharya and rendered as 'Mānasāra', cf A P ch LXI, note 40 and chart I

Amongst South Indian text books the 'Mānasāra' stands relatively nearest to Kāśyapa's treatise which, being referred to in the 'Tantrasamuccaya', belongs to an age prior to the 15th century The 'Mānasāra', moreover, frequently, though summarily, speaks of Buddha and Jina temples and images This would indicate that these religions must have had adherents in S India not very long before the compilation of the 'Mānasāra', it may be assigned to the Pāṇḍya age when high Vimānas were still erected and necessitated the detailed measurements given in the 'Mānasāra'

Most of the sources used in the present context have been published, a few only have been translated ('Mānasāra' and parts of 'Tantrasamuccaya' and 'Vāstu-vidyā') Relevant passages from unpublished texts are given in the Appendix

About four hundred manuscripts on Vāstu-śāstra, as yet not published, are said to exist

# Chart II

## The Twenty Temples

Acc to 'Viśvakarmaprakāśa',‡* VI 82-107, 'Bṛhat Saṃhitā', LV 20-31, 'Matsya Purāṇa'*, CCLXIX 28-56, 'Bhaviṣya Purāṇa'†, CXXX 21-37, 'Samarāṅgaṇasūtradhāra'‡, LXIII 1-34

| Names | Shape of ground plan [number of sides (aśra)] | Number of storeys (bhūmi) | [in cubits (hastas)] Width | Height | Śikhara | Aṇḍa | Śṛṅga | Garbha | Dvāra | Prāggrīva | Kuhara | Gavākṣa | Jāla | Candraśālā | Valabhī |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 Meru | 6 | 12, 16*, 16‡ | 32, 50* | 64 | several | | 100* | Andhārikā‡ | 4 | All | many† | | | | |
| 2 Mandara | 6 | 10, 12* | 30, 15*, 10‡ | 60 | 1 | | | | | Prāsādas have | | | | | |
| 3 Kailāsa | 6 | 8, 9*, 10† | 28, 10*, 16** | 56 | 1 | | | | | | | | | | |
| 4 Vimānacchanda | 6 | 8 | 24, 34*, 12 or 20‡ | 42 | many* | | | | 4‡ | Prāggrīvas and Toraṇas‡ | | Gavākṣas | Jālas | | |
| 5 Nandana | 6 | 6 | 32, 30*, 30‡ | 64 | | 16 | | | | | | | | | |
| 6 Samudra† Samudga | 16* circular | 1, 2* | 8* | 16 | | 1 | 1 | | | | | | | on both sides* | |
| 7 Padma | 16* 8 petals | 1, 3* | 12**, 20*, 8, 12 or 20‡ | 16 | | 1 | 1 | | | | | | | | |
| 8 Garuḍa | Shape of Garuḍa 6‡ with wings and tail * | 7, 1† | 24, 10 or 8* | 48 | | 20 | | | | | | | | 3* | |
| 2nd Garuḍa | | 8*, 6* | | | | | | | | | | | | | |
| 3rd Garuḍa | | 10*, 12‡ | | | | | | | | | | | | | |
| 9 Nandivardhana‡, Nandin | Garuḍa without wings and tail | 7 | 24, 32*, 32‡ | 48 | | 20 | | | | | | | | | |
| 10 Gaja*, Kuñjara | Elephant back | 1, 6** | 16 | 32 | | 1 | | | | | | | | 3, many* on→ | Valabhī |
| 11 Gṛharāja†, Guharāja | Guhā (cave) | 1 | 16 | 32 | | | | | | | | | | | |
| 12 Vṛṣa | Circular | 1, 2*, 3 ?, 5 or 7‡ | 12, 20* | 24 | | 5 1 | 1 | of 4 Hastas** | | | | | | 3 | Valabhī |
| 13 Haṃsa | Haṃsa with beak wings tail, elliptical‡ | 1 | 12, 10* | 24 | many‡ | | 1 | | | | | | | 3 Candraśālā‡ | |
| 14 Kumbha* Ghaṭa | Kalaśa (jar) | 1, 9* | 16‡ | 32 | | 5* | 1 | | | | | | | | |
| 15 Sarvatobhadra | Square, 16* | 5, many‡ | 26, 30*, 30‡ | 52 | many | many | | Temples 17 20 | 4 | | | | | Bhadraśālā | |
| 16 Mṛgarāja*, Siṃha | 12, round* | 1, 6* | 8, 16*, 12* | | | 1 | | No light walls all round Garbha | | Large Prāggrīva* | | | | Candraśālā‡ | |
| 17 Vartula*, Vṛtta | Circular | 1 | 20*, 12‡ | | | 1 | | | One door in the west | | | | | | |
| 18 Caturaśra*, Vairāja‡ Catuṣkoṇa | Square | 1 | 8 | | | 5 | | | | | | | | | |
| 19 Ṣoḍaśāsra | 16 | 1, 2** | 25‡ | | many‡ | 1 | | Pratimā of jewels | | | | | | | |
| 20 Aṣṭāsra | 8 | 1, 3‡ | 28‡ | | | 1 | | | | | | | | | |
| Valabhīcchandaka*‡ | | | | | | | | | | | | | | | |
| Gṛha* | | | | | | | | | | broad* | | | | | |
| Śrīvṛkṣa* | 16 | 3* | | | | | | | | | | | | | |

Alternative figures, in the various texts are indicated by the sign which denotes the respective passage, for example 'Matsya Purāṇa'* The descriptions of the Br S however are valid also in the other texts where no alternative statement is tabulated The chart shows most, though not all the figures, given in the texts

* Refers to V P where it differs from M P

# II VARIETIES OF THE TEMPLE AND THEIR GENESIS

## A THE "TWENTY TEMPLES"

The description of the Twenty Temples in the 'Brhat Samhitā', LV, follows immediately the rules of proportionate measurement They apply to each of the twenty varieties tabulated in Chart II The same names and descriptions are also given in the 'Viśvakarmaprakāśa', 'Matsya Purāna' and other Purānas and in the chapter on Nāgara-prāsādas in the 'Samarānganasūtradhāra' (LXIII 1-34) The same varieties were thus considered as representative of the Hindu temples by the middle of the sixth century and about half a millennium later But there is a difference, for the Twenty Temples are described not only once in the 'Samarānganasūtradhāra' and somewhat summarily, they are also dealt with in some of their 'subtle' details (sūksma laksana) in the selfsame text, in Chapter LVII 641 f and in Ch LIX where some of them are seen to represent, amongst other temples, a particular local school, that of Mālava

The first three names in the 'Brhat Samhitā', Meru, Mandara and Kailāsa, which are those of the Mountain denote the largest temples, they have also the greatest number of storeys or Bhūmis, another temple, Nandana, is equally high, but has 6 Bhūmis only These four varieties and a fifth, called Vimānacchanda, form the first and most important group They have all one and the same shape in plan, this is expressed by the specification that each has six Asras (sadaśra) Aśra means here apparently a side or face and not an angle, the ground plan of these temples is not hexagonal but it has six faces, for each of its three sides has a central buttress which is set off from the wall, its face running parallel to that of the wall, the fourth side, where the entrance is, has no such buttress, a porch (prāggrīva) or a Mandapa protects it Although this side is the entrance side, and generally faces East (prācī) it is not the façade of the temple, the temple strictly speaking has no façade, it faces the four directions, as a monument all its sides contribute equally to its form and meaning The ground plan of the first group of temples thus is a square, the middle of each face projecting from the total length of that side [68] Viewed by an author of the sixth century this shape was evolved

[68] No hexagonal temples are preserved but this would not be sufficient reason for assuming that hexagonal temples did not exist, no elliptical temples (āyatavrtta) are in existence either, yet they figure largely in Vāstusāstra The usual word for hexagon however is Sadkona

The specific use of the terms in Vāstu sāstra has to be reconstructed from the meaning of the passages in which they occur, a comparison with other passages where either the same terms are used or else the same meaning is given though different terms may be employed, and by testing the meaning with the help of actual buildings

Ṣadasra, however, in the 'Śilparatna', XXXVIII 15, means hexagon This text, one millennium approximately later than the 'Brhat Samhitā', was compiled by Śrīkumāra of Kerala in the latter part of the sixteenth Century and deals wtih the South Indian types (IB)

but recently, it had the greatest importance at the time when the 'Brhat Samhitā' was compiled The plain straight walls of the dolmen had preceded it This is why the description 'sadasra' heads the list of the varieties of temples in the 'Brhat Samhitā' and disappears from later lists when the central face (asra) or offset on each side had consolidated as the main buttress (bhadra) in the architecture and terminology of the Hindu temple

Others of the Twenty Temples are circular, or else the walls have 8 or 16 bays which make a cusped ground plan, it is likened to the petals of a lotus flower Another plan is likened to the bird Garuda, the temple Garuda as described in the 'Visnudharmottara', III Ch LXXXVI 60, might have been its shape (see Appendix) The different shapes of the temple carry suggestive names, one of them being Kuñjara or Gaja, elephant, its shape at the back being that of the posterior of an elephant (hastiprstha) might have been apsidal

The four Prāsādas, enumerated at the end of the list, forgoing all metaphor, convey the geometrical form of their plan by their names they are the round, the square, the sixteen and eight sided one (Vrtta or Vartula, Caturasra or Catuskona, etc ) These straightforward names however imply a particular configuration of the temple No light should enter it, walls are built all round, the image in the Garbhagrha is of jewels, an embodiment of superluminous darkness The entrance is from the West so that only the rays of the setting sun can enter the dark passage around the walls of the Prāsāda It is this meaning expressed by the commentary which is implied in the temple plan Square or circular, eight or sixteen sided, the Prāsāda has two walls and a dark passage between them The outer wall is not carried up to the full height of the Prāsāda, it is 'cut' (cheda), ends at a lower level than and is connected with the main building within it, by a roof (Br S LV 28, Comm ) [69]

of temples only The hexagonal type is enumerated as the second but last of seven types of 'shapes' of the temple The first type is Caturasra, the "four-sided"

It seems improbable that the 'Brhatsamhitā' would give the first place to hexagonal temples, in five varieties of which the first and foremost is Meru , Meru, in the 'Matsya and 'Vāyu Purānas' is described as four sided (caturasra)

The temple called Visnucchanda (type IB) of the 'Īśānaśivagurudevapaddhati', Part III Ch XXVIII 113-115, has a hexagonal Garbhagrha and cupola (sikhara) A small temple at Toka on the Godavari is described as having a six pointed star for its plan (J Burgess, 'Report on the Antiquities in the Bidar and Aurangabad District', ASWI, vol III p 21) The temple type, recorded in the eleventh century, in the Ī P is one in a list of 20 temples of South Indian type , it belongs to a different tradition than the Twenty temples of the Brhatsamhitā, and the other Vāstu-Śāstras given in Charts I and II

Astāsra however denotes an octagon , it forms the ground plan of the Mundesvarī temple at Bhabua, Arrah, built before 634 A D (ASI NIS LI p 143 R D Banerji, 'History of Orissa', II Pl facing p 240) and also of the Śankarācārya Temple at Śrīnagar of the eighth century (ASIAR, 1915-16, Pl XLIV) Nonetheless 'astāsrī' in the 'Bhuvanapradīpa' N K Bose, op cit p 125, denotes a Navaratha Temple , having four Rathas on either side of the Bhadra Similarly we are compelled to consider the Sadasra not as a hexagon, but as a square with Bhadras or offsets in the middle of each side Aṣṭāsra, however, admitting either explanation, appears to mean an octagon in the classification of the texts The Sadasra being a special form of the Caturasra is omitted from all the later classifications

[69] A similar construction can best be seen in the temple at Gop, Kathiawar , also in Central India at Bhumara and Nachna Kuthara, and in the Deccan at Bādāmī , these temples however have a superstructure above the ground floor

The last named temples have each one storey or Bhūmi only The remaining of the Twenty Temples have either one Bhūmi only, or else, any number from five to twelve Bhūmis The height of the temple is not necessarily given by the number of Bhūmis The temple Meru has the greatest height, 64 Hastas or 96 feet—it is not advisable say the texts that a building should exceed 100 Hastas in height [70] 64 Hastas is also the height of the temple Nandana, but the former has 12 Bhūmis and the latter only six

The height of 14 of the 20 Temples in the Br S is double their width Following other norms the height is thrice the width of the temple Śikhara designates the tapering superstructure, Śrnga also, but it is without storeys (bhūmi, 'Visnudharmottara', LXXXVI 13) Anda is another name for Āmalaka (cf S S LVII 110, 234, etc ) The number of Andas is one where there is one pointed Śrnga Where however the storeys are many, in the temple Nandin, or the Śikharas, of the temple Sarvatobhadra, or the roof is of a different shape the number of Andas is many, several such devices supported a row of finials, similar to those of the keel-shaped roof of the Bhīma Ratha at Mamallapuram, where their number is eighteen

The 'four sided' temple moreover is described as having 5 Andas, one crowns the high Śikhara, and clinging to each of its sides is a lesser Śikhara each with its Anda Each Śikhara or Srnga carries above its crown a Kalaśa or jar of the nectar of deathlessness [71] The lateral Śikharas, later texts designate as Uromañjarī They face the four directions

This was also originally a function of the four doors which are explicitly prescribed for the temples Meru and Sarvatobhadra, in extant temples, the niche (ghanadvāra) in the centre of each wall corresponds to the original door (dvāra) The temple with a door in the four directions, and the shrine with double walls full of darkness, and one door only, represent each a different tradition Few Hindu

This type of temple is particularly that of a Hindu temple, with the light shining forth from the centre in the darkness of the interior which is safeguarded by the circumambulatory itself in darkness The devotee entering the outer door, turns to the left, having the shrine on his right, when he walks around it Temples with their covered circumambulatory are known in later texts as *Sāndhāra*, *the dark circumambulatory is the* Andhakārikā, or Bhramanī, etc

[70] 'Īsānasivagurudevapaddhati', III ch XXX 32, so as not to be easily damaged by great storms, etc This rule prevailed at the climax of the temple building activity in the 10th century A royal palace, on the other hand, in the 6th century was 108 Hastas high, its base is much broader than that of a temple

Bhūmi, thus in the chapter of the 'Brhat Samhitā' dealing with temples is not equivalent *to an actual storey as it is in* secular buildings There the height of the first floor is given by the formula that it is one-sixteenth of the width of the building plus four cubits (Br S LII 22-23) In a royal palace which has a height of 108 Hastas, the height of the first floor is ten Hastas and eighteen Angulas and each subsequent storey is one twelfth part lower than the preceding This restriction applies to brick *walls only, and not to wooden ones* The height of the successive Bhūmis of the superstructure of a temple also decreases progressively but far more rapidly, see for example, the chapter on the South Indian proportions and S S LXII 183-191 The storeys of the temple are unlike those of the houses of men though they resemble them in their position and parts

[71] Buildings represented in the reliefs of Barhut, Sāñcī, Amarāvatī, etc (Coomaraswamy, 'Early Indian Architecture', op cit Pls XCII, XCIV) show the roof ridge with 'water pot' finials

temples exist having four doors, in Kashmir, and a small temple in Sinnar, in the Deccan, for example Jaina temples, however, as a rule have four doors

The subservient parts (anukāya anga) of architectural and symbolic significance of the Twenty Temples are Prāggrīva, the porch, Torana, the gateway, Candraśālā and also the Citraśālā, the gabled chambers on or above the Kapota, the Citraśālā having been most probably a painted chamber, Valabhī being the vaulted roof itself which contains Candrasālās (Br S LV 25, Comm ) The Candrasālā, as represented on the Prāsāda, might have indicated only an internal space by its Gavāksa, the round window within its pointed arch Such gable windows are set singly, or combined in rows, whole rows moreover are superadded so as to form a lattice or Jāla, for the Gavāksas on the extant temples are blind windows, just as the niches are massive doors [72] Either of these are symbolic forms on the Prāsāda The Gavāksas are carved on cornices (kapota), the Kapota, the "eaves of the thatched roof" moulding, superadded one above the other had formed the Śikhara of slabs in its pyramidal (IA) and curvilinear variety (IIB) as well With their closely set rows of Gavāksas, these superimposed roof-edge-slabs are seen covered in their total extent as one Jāla or lattice of which the unit is a Gavāksa On the Pāpanātha Temple at Pattadakal, built more than a century after the compilation of the 'Brhat Samhitā', the Jāla can be seen in a far advanced state, in the shape of an intricate network of curves which covers the middle buttress of the Śikhara, whereas on its lateral parts the horizontal courses of the Bhūmis,—the strata of roof-edged 'slabs',—are marked each by its row of Gavāksas

The 'Viśvakarmaprakāśa', the 'Matsya' and 'Bhavisya Purānas', and the S S LXIII, show the Twenty Temples rich in form, with many subsidiary Śikharas and Kalasas, with a large number of Bhūmis and great in height and width, the Meru attaining to the maximum height of 100 Hastas, its width measuring 50 Hastas

All these Prāsādas can be constructed either of timber, bricks or of stone This alternative is important, for those Prāsādas (S S XLIX 6-7) which are built in the "likeness of the chariots of the gods" should be of bricks or stone only

The leading varieties of the list of the Twenty Temples represent Type II, and their description adds further characteristics to this type which the few preserved temples of the "early" centuries do not show [73] These are especially the 5 Andas of the Caturasra Temple, which means a Prāsāda with a square plan having

[72] Candrasālās in the Valabhī are to be seen on the Ratha of Nakula and Sahadeva in Mamallapuram (Coomaraswamy, 'Indian Architectural Terms', JAOS, vol 48, Pl facing p 259) There are three candrasālās on the broad side of the Valabhī, as prescribed in the Br S —Kuhara seems to be the 'cavity' of Śukanāsā, etc

The single Gavāksa opening in the superstructure of the Kandariya Temple (Pt VI note 65) serves its original purpose

[73] ASIAR, 1924-25, p 125, opines that "the Matsyapurāna', ch 259, contains directions for the building of temples of two classes, the one with curvilinear Śikhara and the other with a storeyed superstructure In the latter type 20 different types of temples are named In the Br S the type with the curvilinear Sikhara finds no mention but 20 types of storied temples are described"

This interpretation, as is proved by the terminology, description and proportions assembled in charts I and II cannot be correct

a central Śikhara with its Anda, and four lateral Uromañjarīs, each with its crown or Anda, clinging to the sides of the central Śikhara This type of temple in later versions, exists in Central India, etc , and has attained its fullest and most detailed form in Khajuraho (Pls I, III)

These temples, says the 'Matsya Purāna', are meant to enshrine a Linga The 'Brhat Samhitā' however speaks, not of the Linga, but the image (pratimā), in general, and in connection with the 'dark', double walled, fundamental forms of the temple, the square, circular, etc , in particular The temples of the 'Brhat Samhitā' were not intended to house the Linga, the symbol of Śiva Whatever the destination of the temple, Śaiva, or Vaisnava, it had originally its bearing on the architectural form The symbol or an image in the centre, the images on the walls of the Prāsāda—and the symbol fixed on the finial of the Śikhara—show the particular divinity to whom the temple is dedicated [74]

The Twenty Temples form the nucleus of a development of each variety and its ramifications Some of these, widely dealt with by the texts, have not survived in actual buildings So vast is the 'ocean of the science of architecture' and so rich in forms that Viśvakarman, quoted in the 'Bhavisya Purāna', I. CXXX 36, does not appear to exaggerate when he is said to have spoken of three thousand kinds of temples of various shapes

The 'Agnipurāna' embodies knowledge which must have been formulated and recorded over a long stretch of time Twice it gives a chapter on Prāsāda Laksana,

[74] 'Samarānganasūtradhāra', ch LVIII ''Prāsāda-stavanam', verses 4-17 , "Of these (64) Prāsādas 8 belong to god Śambhu (Śiva), 8 to Hari (Visnu), 8 to Viriñca (Brahmā), 8 to the Lord of the Grahas (the Sun), 8 to Candikā, 8 to Ganesa, 8 to Śrī (Lakṣmī) and 8 to the rest of the gods

Vimāna, Sarvatobhadra, Gajaprṣtha, Padmaka, Vṛṣabha, Muktakona, Nalina and Drāvida—these 8 belong to the enemy of Tripura (i e Śiva)

Garuda, Vardhamāna, Śankhāvarta, Puspaka, Grharāṭ, Svastika, Rucaka, Pundravardhana —these 8, the ornaments of the city (pur), belong to Janārdana (Hari)

Meru, Mandara, Kailāsa, Hamsa, Bhadra, Uttunga, Misraka, Mālādhara, these 8 Prāsādas belong to Brahmā

Gavava, Citrakūṭa, Kirana, Sarvasundara, Śrīvatsa, Padmanābha, Vairāja and Vrtta—these 8 Prāsādas of auspicious features belong to the Sun Nandyāvarta, Valabhī, Suparna, Simha, Vicitra, Yogapīṭha, Ghanṭānāda and Patākin, these 8 abodes of God belong to Candikā

Guhādhara, Śālāka, Venubhadra, Kuñjara, Harsa, Vijaya, Udakumbha and Modaka, these 8 auspicious Prāsādas should be constructed for Vināyaka (Ganesa)

Mahāpadma, Harmya, Ujjayanta, Gandhamādana, Śatasrnga, Navadvaka, Suvibhrānta and Manoharin, these 8 belong to Lakṣmī

Vrtta, Vrttāvata, Caitya, Kinkinī, Layana (cave-temple), Pattisa (tent or made of cloth), Vibhava and Tārāgana, these 8 Prāsādas should be constructed by one skilled in the Vāstu-Śāstra, for the rest of the gods "

With this enumeration however has to be compared S S LV 105-108 "Kailāsa is the abode of Mahesvara, Garuda of Viṣnu, Padma of Prajāpati, Gaja (Dvipa) of Gananātha These are not to be constructed for any other god Triviṣṭapa is an abode of all the gods The different forms of Prāsādas, other than these belong to all the gods without distinction "

To this have to be added further specifications, such as ch LVI 35 "Meru for Hari, Hiranyagarbha, Bhāskara and not for any other god", ch LVII passim, and LIX 4

It would not be safe to attempt a classification of the temples on the basis of their dedication to the deities at the age of the S S Nonetheless a definite shape of the temple originally implied a definite dedication which was also expressed by its name This is shown in the 'Visnudharmottara' (see Appendix)

the features of the temples The earlier one, XLII, is practically identical to the respective passages in the 'Hayaśīrsapañcarātra' from where it seems to have been absorbed into the 'Agnipurāna' The later chapter CIV, also has its prototype in the 'Hayasīrsapañcarātra', the proportions given there are less pure than in all the other 'early texts', it appears further removed from the principles and origins and nearer to the contingencies of actuality The Śikhara is given particular attention, for not only are its vertical proportions dealt with as in the other texts also, but the horizontal proportions are also stated, although of its upper part only The width of the Vedikā is given as 10, this is the width of the Śikhara where the Śukanāsā ends, the width of the Śikhara at its base is not given, assuming however that it is of the type of an Orissan Śikhara, the two may be same The width of the shoulder course is 5 parts, or half as wide [76] The neck occupies three parts and the Andaka (Āmalaka) has a width of four parts (CIV 23) The preceding verse goes even further and details the proportions of the finial (Cūla)

These proportions however are no longer those of the Twenty Temples but of a different variety of the same type (II) They are known as the Forty-five Temples

The Twenty Temples represent a liberal assortment of architectural shapes A selection was made and five basic shapes were to ramify in the several schools of mediaeval architecture, in forty-five variations and also in different sets of sixty-four shapes each

The Twenty Temples however are not forgotten They are the Nāgara Prāsādas of ch LXIII of the 'Samarānganasūtradhāra', their names are incorporated in those of the temples in chapters LVII and LIX, and in the hundred—and one temples of the 'Visnudharmottara'

[76] The width of the shoulder course is generally given as 6 parts out of the 10 parts allotted to the base of the Śikhara See p 208, note 61

## B THE FIVE VIMĀNAS AND THE 45 TEMPLES

Vairāja, Puspaka, Kailāsa, Manika and Trivistapa, these 5 chariots of the Gods, are the primary shapes Meru heads the list The first is square, the second rectangular, the third is round, the fourth elliptical and the fifth is octagonal Each of them has 9 subvarieties So there are altogether 45 varieties of these Prāsādas ('Agnipurāna', CIV 11b-21)

The chart on p 278 gives their names according to the 'Agnipurāna', Garudapurāna' and the 'Prayogamañjarī The last named text is a later, South Indian compilation [76]

Meru is the foremost and highest of the twenty Temples (p 270A) It is also the foremost of the 32 Jātītara temples of the Southern school as represented in the 'Īśānaśivagurudevapaddhati' III ch XXVIII 10 The most eminent of various lists of the temples is likened to the World Mountain

The 45 temples are distinguished by Śikhara, Kantha and Āmalasāraka (A P CIV, 10-11) Their names are those of Nāgara and Lāta Prāsādas (verse 22) They are Nāgara Prāsādas (chart I) built in a particular region, Lāta or Gujarat Their classification (p 278) is rational, it discards certain shapes of the earlier lists (chart II) such as the six and sixteen sided plans, a consolidated school within the Nāgara tradition has laid down its programme

A digression may be permissible here Verses 11-12 may also mean that the 5 Vimānas, the Chariots of the Gods, are placed on the head of the Meru This has no bearing on the 45 temples Meru however not only heads many lists of temples, it should also be contemplated as the support of some These are the High Temples (Vimāna, pp 194 f, 293) Meru, as the support of the Vimāna of the gods has the shape of the mountain or of the pillar, it is the cosmic axis Its architectural form is the Prāsāda [77], and also the Stambha[78], the free standing pillar The Stambhas on which Aśoka in the third century B C had his Dharma inscribed are better known than others, such as the Mānastambhas of the Jains or the Āyakakhambhas of the Buddhists and other free standing pillars which carry a small High Temple The former bear on their capital a small pavilion supported on four pillars, the latter terminate with an abridged chapel shape

[76] The 'Prayogamañjarī' VI 15, says People of this world have neither enthusiasm and knowledge nor the money to have the temples constructed in all these varieties The text seems to be considerably later than the two Purānas, see note 67, and explains, to some extent, the absence amongst preserved monuments of certain shapes, such as especially the elliptical temples

[77] One of the generally accepted forms of the 'Meru' is the stepped pyramid, in that form (cf also Type I A) it has wide currency under the very same name Meru, in Greater India, miniature models of the Meru are kept in Burmese monasteries and sanctuaries They too, have the shape of a stepped pyramid (R Heine-Geldern, l c Fig 23)

[78] Fergusson HIEA, vol II p 81, Figs 302, 308 A H Longhurst, 'The Buddhist Antiquities of Nāgārjunakonda', Memoir 54, ASI Pl XI b, c

A miniature temple on a pillar, from Kashmir, is illustrated by Fergusson, op cit, vol I p 256, cf also the slab or 'pillar' carved in the shape of a Śikhara temple surmounted by an

## The Five Vimānas
## and
## The 45 Temples
### according to 'Agni Purāṇa', CIV 11-12[*], 'Garuda Purāna', I XLVII 21 f and 'Prayoga-Mañjarī', VI 4-13

| The Vimānas of | 1 Brahmā Vairāja Caturasra (Square) | 2 Kubera Puṣpaka Āyatāśra (Rectangular) | 3 Śiva Kailāsa Vṛtta (Circular) | 4 Varuṇa Maṇika Vṛttāyata (Elliptical) | 5 Indra Triviṣṭapa Aṣṭāśra (Octagonal) |
|---|---|---|---|---|---|
| The "45 Temples" derived from the "5 Vimānas" | Meru* | Valabhī*<br>Gṛharāja*<br>Śālāgṛha<br>Mandira<br>Viśāla [A P ]<br>Vimāna [G P ] | Valaya<br>Dundubhi<br>Padma*<br>Mahāpadma<br>Mukulī [not in A P ] | Gaja*<br>Vṛṣabha*<br>Haṃsa*<br>Garuḍa*<br>Siṃha*<br>Bhū[illegible] | Vajra<br>Cakra<br>Muṣṭika [G P ]<br>Babhru [G P ]<br>Vakra [G P ] |
| | Mandara* | Brahmā Mandira | Uṣṇī | Bhūmukha [G P ] | Svastika |
| | Vimāna* | Bhavana<br>Prabhava [A P ] | Śaṅkha | Bhūdhara | Khaḍga |
| | Bhadraka | Uttambha [G P ] | Kalaśa*<br>Khavṛkṣa [A P ] | Śrījaya | Gadā<br>[illegible] |
| | Sarvatobhadra* | Śivikā Veśma | Guvāvṛkṣa [G P ] | Pṛthvīdhara | Śrīvṛkṣa* |
| | Caruka [A P ]<br>Rucaka<br>Nandana<br>Nandivardhamāna*<br>Śrīvatsa | | Vardhanī [A P ] | [illegible] | Śveta [G P ]<br>Vijaya<br>[illegible]<br>Vajra Svastika |

An indispensable part of the Buddhist Stūpa is the Harmikā, the railing which surrounds its shaft where it emerges from the dome-shaped pile of the monument This railing is square (caturasra koṣṭha), it encloses moreover a small pavilion or chapel—similar to that on the Āyakakhambhas and also to the High Temple of a Drāvida Prāsāda—where it is not represented in the shape of a solid cube The part where the shaft of the central pillar of the Stūpa emerges above the Harmikā is called Devatā Kotuva in Ceylon It is there that the 33 gods reside, in their heavenly world, above the sphere guarded by the Regents of the directions of space The hierarchy of divine manifestation is thus accommodated in the monument, it is especially located within its vertical axis, the Cosmic Pillar The Harmikā and Devatā Kotuva are above the expanse of the Stūpa, and are part of as well as

Āmalaka and Kalasa , the date is 'late mediaeval' (J Ph Vogel, 'Catalogue of the Archaeological Museum at Mathurā', p 193) The pillar on the other hand, which supports an Āmalaka (Bedsa, Karli, Nasik, etc ) is a cognate symbol (Part VIII)

[*] The names [A P ] are those of the Agni Purāna
The Names [G P ] of the Garuda Purāna, the others are common to G P and A P
The names marked * occur also in the lists of the "Twenty Temples"

surrounding its axis, they exactly correspond in place and function to the 5 Vimānas as 'High Temples'

Not only in India itself, but also in Indian colonial architecture, the gods are known to reside on the top of Meru In Bali, the central pillar, where it forms the peak of the temple is hollowed immediately below its point Nine gems are deposited there of which the one in the centre denotes the presence of Śiva This central post does not exist actually in the stone and brick temples of India Its position and extent however are indispensably part of the Prāsāda (Part VI)

The position is marked by the central, vertical axis around which the temple is built, its extent is shown by the shaft or neck (grīvā, kantha) which emerges above the shoulder-course (skandha) of the highest level (bhūmi) of the truncated superstructure The shaft or neck, in the temples of South India, assumes the shape of the walls themselves of the High Temple (vimāna), they are, moreover, also called by the name of neck (kantha, gala) In such Prāsādas, however, where there is no High Temple, the round shaft emerges from the shoulder course and is clasped at a given distance, by the Āmalaka

The top of Cam temples in Cambodia is crowned by a Linga, it is the seat proper of divinity The shaft of the central pillar, if extended to the bottom of the Prāsāda holds the central Linga in the Garbhagrha of a Śiva Temple (Fig 1, on p 212) The top of Indian temples is invariably surmounted by a final of which the Kalaśa is the most important part In this jar the Golden Prāsāda-Puruṣa is installed (Part VIII)

The central shaft of the temple holds the divine presence, it is specially manifested on the lowest level, in the womb, the Garbhagrha, and on the highest level, above the body of the temple The vertical column of the temple is the cosmic trunk and its quadruple ramifications are the four directions of space in which the Prāsāda has its extension [16] The vertical column of Prāsāda and Stūpa alike has its prototype in that vertical shaft across the strata of the Vedic altar formed by the naturally perforated 'bricks', the Svayamātṛṇṇā stones, which were placed in vertical succession above the Golden Puruṣa

The Āmalaka, the cogged ring stone, is an equivalent of the highest of these perforated stones it was placed above the last, the fifth layer of the Altar Where no Āmalaka clasps the 'neck' of the pillar of the temple, the High Seat of divinity is placed in the High Temple, the "very small" (kṣudra-alpa) Vimāna, which crowns the South Indian Prāsāda The shapes of this High Temple are square or circular, or rectangular or elliptical, the latter two being considered special forms of the former, the octagon too is one of its shapes

The shapes only and not the names of the 5 Vimānas or Chariots of the Gods, have been given to the High Temples Triviṣṭapa is the heaven of Indra, and of the 33 gods, Triviṣṭapa is also the name of the chariot of Indra Another name is Vairāja, it belongs to the cosmic intellect, Virāj, who rules over and unites the whole manifestation which is integrated in himself, Virāj, the non-supreme

[16] 'Dikcakrabhramalakanda', of the Deopāra inscription of Vijayasena, as understood by P Mus, op cit p 413 Cf 'Ep Ind' I p 311, and R C Mazumdar, '*Inscriptions of Bengal*', vol *III*

Brahman It is therefore also the name of the chariot of Brahmā The other names are those of the celestial chariots, the Kailāsa of Śiva, the Puspaka of Kuvera, and the Manika of Varuna The chariots of the gods, the sky-travellers, have alighted on top of the World-Mountain in which inheres the cosmic pillar, and show by their shape to whom they belong The Five Vimānas on the top of the temples correspond to the other small 'High Temples' set up on pillars such as the Caturaśra-kostha, the Harmikā, below the Devatā Kotuva, within the central shaft of the Stūpa, and to the small chapels which crown the Māna-stambhas and Āyaka-khambhas Meru which supports them is a free standing pillar or the central shaft of the monument, the temple

The pillar, the shape of the Cosmic Axis on which rests the Āmalaka or the Vimāna of God, is sheathed in the body of the temple The mass of the monument, the temple, is fitted around the pillar and its mantle has many forms That of the 45 temples is hemmed by the shape of the 5 Vimānas and has an Āmalaka for its crown In the South Indian version, a small Vimāna, alike to one of the five celestial chariots, is given the place of Āmalaka and Kantha

The Vimāna placed on top of Meru is the small domed shrine, which is placed on top of the flat roof of a dolmen temple of one storey (Fig c, Part VI) or its repetition in the vertical and forming a pyramid of many storeys In its simplest and original form this type of the temple consists of one such storey only, the prism or cube of the dolmen type Garbhagrha On this flat roofed shrine thus another is placed This indeed is the form of the small shrines of South India which are called Alpa-prāsāda In their aggrandised shape, having one Garbhagrha above the other, or a series of storeys in receding tiers, these temples, called Meru, would be stepped pyramids, like those preserved in South India but without the parapet of chapels around each storey In Northern India too, this shape occurs but in a different version In the 'terrace temples', in Ahicchatra and Paharpur, it is the solid stepped pyramid consisting of terraces which forms the Meru It is traversed by a shaft, square in section and equal in area to the High Temple in the centre of the topmost terrace

The Meru below the Vimāna, the Mountain on which rests the High Temple, is not only an Indian architectural concept The cubical or rectangular substructure of the Zikkurat[81] is also the Mountain, on it is placed the Hut, the dwelling of divinity

[81] W Andrae, 'Das Gotteshaus und die Urformen des Bauens im alten Orient,' (1930), speaks of the cubical or prismatic sub structure of the Zikkurat as being the Mountain On it is placed the Hut, the abode of God

## C THE FIVE VIMĀNAS AND THE 64 HALL TEMPLES

From the Five Vimānas on which the gods travel in the air and from the five temple shapes built in their likeness were derived forty-five varieties of temples, square, rectangular, circular, elliptical and octagonal, nine of each kind

From the self-same five shapes of the Vimānas, the 'Samarāṅganasūtradhāra', Chapter XLIX, derives 64 kinds of temples, Vairāja, the square one, having 24 varieties and the other 10 varieties each (Chart on p 281) They are to be built in towns and are made of stone or burnt brick (S S XLIX 6-7) Their names are

THE 64 TEMPLES DERIVED FROM THE 5 VIMĀNAS ACCORDING TO 'SAMARĀṄGANASŪTRADHĀRA', *ch* XLIX 22—202

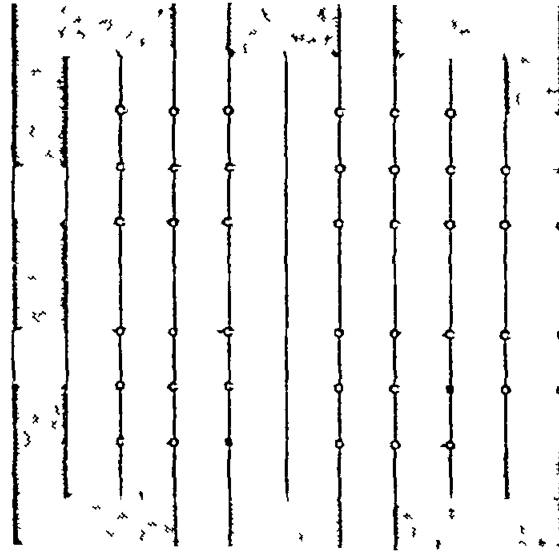
| I<br>Vairāja, the Vimāna of Brahmā | II<br>Kailāsa, the Vimāna of Śiva | III<br>Puṣpaka the Vimāna of Kuvera<br>Prototypes of | IV<br>Maṇika, the Vimāna of Varuṇa | V<br>Triviṣṭapa the Vimāna of Indra |
|---|---|---|---|---|
| 24 varieties of Square Prāsādas | 10 varieties of Circular Temples | 10 Oblong Temples | 10 Elliptical Temples | 10 Octagonal Temples |
| Rucaka[82] | Valaya | Bhāva | Āmoda | Vajraka |
| Siṃhapañjara | Dundubhi | Viśālā | Raitika | Nandana |
| Citrakūṭa | Prānta | Sāmmukhya | Tunga | Śaṅku |
| Bhadra | Padma | Prabhava | Caru | Mekhalī |
| Śrīkūṭa | Kānta | Śibiragṛha | Bhūti | Vimāna |
| Uṣṇiṣa | Caturmukha | Mukhaśālā | Niṣevaka | Lava |
| Śālāgṛha | Maṇḍūka | Dviśālā | Niṣedha | Mahāpadma |
| Gajayūthapa | Kūrma | Gṛharāja | Siṃha | Haṃsa |
| Nandyāvarta | Taligṛha | Amala | *Suprabhā* | *Vyoma* |
| Avataṃsaka | Ulūpī | Vibhū | Locanotsava | Candrodaya |
| Svastika | | | | |
| Kṣitibhūṣaṇa | | | | |
| Bhūjaya | | | | |
| Vijaya | | | | |
| Nandi | | | | |
| Śrītaru | | | | |
| Pramadapriya | | | | |
| Vyāmiśra | | | | |
| Hasti Jātya | | | | |
| Kuvera | | | | |
| Vasudhādhara | | | | |
| Sarvatobhadra | | | | |
| Vimāna | | | | |
| Vimuktakoṇa | | | | |

[82] Rucaka like Meru, is the name of more than one type of temple Rucaka is the name of a mountain ridge which projects from the base of Meru, on the South Other mountains, whose names were given to temples are

Mālyavān (ch 65), described as a Bhūmija Prāsāda , Trikūta (ch 57) , Niṣadha (ch 65), a Bhūmija Prāsāda , Gandhamādana (ch 59) , Nandana, Himavān, Sṛngin, Nīla, Śveta, etc

only partly the same as in the list of the Agnipurāna (p 278), the square varieties have vastly increased in number, moreover, certain temples (Hamsa), described for instance as elliptical in the first list, are amongst the octagonal temples in the second, or, Mahāpadma, circular in the one list, is octagonal in the other The names thus do not denote the same shapes, the name of Meru, however, which is particularly mentioned and actually heads the first list is absent from the second In short, the 64 temples of Chapter XLIX of the 'Samarānganasūtradhāra' differ from the 45 temples of the other list although their prototypes in heaven and the shape of their horizontal sections are the same

The 64 temples of Chapter XLIX are low buildings, in the centre is the Garbhagrha, its position is marked by four pillars only (verses 64, 80, etc Fig on p 282) It is surrounded by pillared or walled corridors (ālinda, etc ), these alternate with broader pillared halls (śālā), pillared porticoes (prāggrīva) are placed in front of the doors of the inner walls, Prāggrīvas also project beyond the outer walls, which, as a rule, have two windows (gavāksa) on each side The plan of the building is laid out in concentric zones, the method being that the square or any other of the five shapes of the plan is divided into a given number of equal parts (bhāga), they range from four to twelve in the different temples, the width of the Garbhagrha having 2 parts, the rest measure the extent of the ground of the various pillared halls and corridors, separated in the larger temples by an internal wall, they have two or three Ālindas all round Their colonnades are formed by pillars with equal intercolumniations, one Bhāga being the unit, whereas the pillars are doubly spaced on the 4 sides of the Garbhagrha so that a cross results in the plan formed by the two broad, east-west and south-north corridors



Scheme of Plan or Samsthāna of the temple Svastika, S S XLIX, 62 67

('Viṣnupurāna', II ch 11) Some of the names of the Bhūmija Prāsādas are amongst those of the 100 temples of the 'Viṣṇudharmottara' (see Appendix)

The Garbhagrha, if it has four walls, has sometimes four doors or it has only one entrance [83] Toranas or gates are set up in the larger temples, in the middle of two pillared Ālindas (in the temple Prthivījaya, for example, verses 80-88), the distance between their posts has the width of the Garbhagrha or Devakostha, the latter term is more appropriate where the innermost sanctuary is marked by four pillars only, one in each corner and has no walls

The Prāsāda is raised on a socle (pītha) whose height is one part (bhāga), stone steps (sopāna) from one or two sides lead up to it in the temple Gajayūthapa (verse 44)

The temple Rucaka (verse 25-28),[84] the first of the '64 temples', within its pillars, etc, is so to say the nucleus of the others, it has a width of four parts (bhāga), the vertical proportions of the square Garbhagrha, measuring two parts are one part for the socle (pītha) and 3 parts for the height of the Prāsāda of which 1½ parts are the height of the pillars (stambha), above them is the 'upper part' of the Prāsāda, it has 3 roofs (chādya trayam), a neck (kantha) and Āmalasāraka (Cf the upper portion of Fig c, Part VI) The temple is as high as it is broad The height of the door is 1 part, its width is half of it

The proportions of the Garbhagrha and its parts do not change In the square hall temples, its width is invariably 2 parts, whether the temple covers an area of which the side has 4 or 12 parts Its door is always 1 Bhāga (part) high, and half as broad The Garbhagrha is the unchangeable nucleus of the several zones which are made to encompass it,[85] the temple Rucaka is its shell If circular, the disposition of the ground plan remains the same in principle, the single corridors measuring 1 Bhāga in width, the intercolumniations also being the same A simple example of this type is the wood-brick temple excavated at Bairat (Jaipur), of c the 3rd century B C Low pitched roofs (chādya) crowned by an Āmalasāraka (Āmalaka) raised on its neck (kantha) cover the temple 'Rucaka' [86] The other temples described in Chapter XLIX, are covered by one Chādya which is circular on round temples, or by a double roof, Dvichādya, the portion of the colonnade under the protracted eaves, is called Valabhī [87]

[83] The circular temple 'Valaya' is called Caturmukha if it has 4 doors and Mandūka if it has one entrance only (S S XLIX 119-121)

[84] The temple Rucaka, of ch XLIX 25-28, differs from the temple of the same name and described in ch LVI 44-50, of the 'Samarānganasūtradhāra' In ch LVI, it has a Śikhara, but the rhythm of its ground plan is the same as in ch XLIX

[85] The innermost sanctuary, in the oblong temples, is a double square, in one of the oval temples (Suprabhā) it is octagonal, demarcated by 8 pillars (verse 181) The rectangular temples have the shape of a double square, in the elliptical temples the lengths of the two main co ordinates are, analogously, 8 and 4 Similar in plan, though without walls, but having a railing instead are the circular sanctuaries represented in the reliefs of Barhut and early Amarāvatī The rectangular temples shown there are open pillared 'hall' temples cf p 118, 145

[86] A miniature Dvichādya with its Āmalaka would thus also be the proper description of the roof of the water pavilion of Mahākūṭa Different kinds of roofs are here referred to, the one of slabs being perfectly flat, cf also the central Indian Gupta temples, the other having a low pitch

[87] Valabhī, takes sometimes the place of Prāggrīva (verse 201) Valabhī is also one of the names and shapes of the Kapota or Mekhalā, the cornice moulding of the entablature

The 'hall temples', without internal walls, with rows of pillars, resemble in plan the Ladh Khan Temple in Aihole and also the circular temple in Bairat, if one is to compare these preserved examples with the richer and later varieties of Chapter XLIX of the 'Samarāṅganasūtradhāra' Such are its 64 Prāsādas built in accordance with the five shapes of the chariots of the gods

Although they are generally low, spreading structures, the arrangement of their roof having an Āmalasāraka, with its Kantha in some cases, was similar to the superstructure (Type I A) as it is known in its early phases All these temples however having one roof, or a double and even a triple roof are without a superstructure proper This is clearly stated in a following Chapter (LII) of the 'Samarāṅganasūtradhāra' The rudiments of a superstructure (Type I A) are, however, in the description of the upper portion of the temple 'Rucaka' as much as they are in the slabs and the Āmalaka of the Linga shrine at Mahābalipura and various chapels represented in the ancient reliefs and paintings

The hall temples were buildings not primarily destined, it seems, for Hindu worship They lent themselves to Buddhist rites and had to be condensed to serve the purpose of the Hindu temple While they did not contribute towards the origin of the Hindu temple they also did not essentially determine its ultimate form They were, however, utilised and adapted for its purposes

The 64 temples had to undergo a process of condensation of their plan, until the internal galleries and their pillars were compressed in one internal circumambulatory between thick walls, when its Śālās, Prāgrīvas and Valabhīs became 'Anukāya-aṅgas' or parts of the wall itself The hitherto diffuse balance of the plan laid out around the centre became organised from within The new compactness was a necessity so that the high superstructure might tower over the centre and rest securely on the walls of its base

While following the one account of the 15 Prāsādas ('Agnipurāṇa' CIV), Nāgara and Lāṭa Prāsādas were built alike in shape to the five celestial chariots, in the other tradition the 64 Temples, alike in plan to those of the Five Chariots, had to 'carry' divinity, this was expressed subsequently in a monumental sense by the addition of the superstructure (S S LII 20-22), which thus 'conveyed' divinity to the devotee coming from afar

The 'Samarāṅganasūtradhāra' (Ch XLIX) describes 21 temples having a square plan, their prototype is Vairāja From these, one storeyed temples, further eight Vimānas were formed and they have Śikharas (S S LII 20-22) Five of them, Rucaka, Bhadra, Sarvatobhadra, Avataṃsa and Muktakoṇa are in the list of the square temples (Chart on p 281), the shrines of a certain type remained Rucaka or Bhadra, etc , even though a Śikhara was superposed The three other temples are Meru, Mandara and Vardhamāna, these, and especially the images of the Mountain, are absent from the list of the 64 chariot-like temples, the

or upper zone of the wall of the temples which have a superstructure The eaves of the Chādya too, are retained amongst the profiles of the entablature, on some temples they are doubled or trebled (dvichādya, trichādya) and form the canopies by which the images on the walls are shaded and protected (Pl III) A special variety of this architectural Anukāya is known as Mallacchādya (S S LX 85, etc )

images of the mountain now appear super-added to the various hall temples (Fig d, p 183) and are its Śikharas [88]

[88] Some of the temples in Aihole are hall temples with a Śikhara superadded either in the original design (Fig d, Part VI ) or as an afterthought (Durga temple) As part of the original design, the curvilinear superstructure, the Śikhara, rises above the Garbhagṛha of the rectangular hall temples at Alampur (Raichur, Hyderabad) from their flat roofs ('Report of the Archaeological Department of the Nizam's Dominions,' 1926-27, Pl X) Cf also the Pāpanātha Temple in Paṭṭadakal The hall temples in Alampur serve as Mandapa and Sāndhāra Prāsāda combined These combinations lacked consistency and were not continued beyond the ninth century

## NĀGARA, DRĀVIDA AND VESARA

The early sources, from the 'Brhat Samhitā' onwards to the earlier chapters of the 'Agnipurāna' classify the temples neither according to Nāgara, Drāvida and Vesara nor according to their regional distribution They give the norms of proportionate measure and list 20 possible shapes of the Prāsāda which conform with the canons

Fifteen out of the 20 names of the early texts are repeated amongst the "45 Temples" ('Agnipurāna', CIV, etc ) Amongst the five which are not repeated are the Square, the Octagonal, the Sixteen sided and the Round Temple, they have no place in a classification which itself is based on 5 prototypal shapes, namely the square, oblong, circular, elliptical and octagonal The earlier list having been rationalised and augmented, the 'Agnipurāna' CIV, 22, moreover, adds in the verse immediately following the standard proportions and the subsequent enumeration of the 45 names "These are the names of Nāgara as well as of Lāta Prāsādas " Lāta is the ancient name of 'Gujerat' it is the country to the west of Ujjain and to the south-west of Vidarbha (Berar) Nāgara however is not amongst the names of ancient Indian geography

The name Nāgara occurs frequently in the 'Īśānaśivagurudevapaddhati' and the 'Samarānganasūtradhāra' Both these texts belong approximately to the same age, the one belongs to South India, the other to Dhārā,[89] in Malwa, the first named text treats of one type of temple only,—the Drāvida,[90] whereas the latter is a compendium dealing with the main types then known Both the texts are contemporary with temple architecture at its climax Nāgara, in the 'Īśānaśivagurudevapaddhati' occurs in connection with the names Drāvida and Vesara, in the 'Samarāngana-

[89] The 'Īsānasivagurudevapaddhati,' embodies the teachings of a long line of Siddhāntikas who were influential all over India during the ninth to eleventh centuries and later Part III, the chapters of the 'Ī P ' dealing with the architecture of the temples may have been written at the Goraṭika maṭha in Dhārā, if not in a monastic establishment even further south

[90] This name however is absent from chapters XXVIII and XXIX which treat of the Prāsādas and Vimānas and classify them according to their 'Alamkāras' (XXVIII 23) This term is used in a sense analogous to 'Lakṣana' in the 'Brhatsamhitā', etc , and denotes the specific shape of the various temples Each has a name of its own, Nalina, etc , Meru, etc In chapter XXX 41-42, the 'Ksudra-alpa Vimānas', the diminutive High Temples at the top of these structures are labelled according to their shapes, as Nāgara, Drāvida and Vesara It is in this restricted application only that this terminology applies to the South Indian temples which themselves are known under the regional and ethnical designation Drāvida In this, its original application in Vāstuśāstra, the name is absent from chapters XXVIII and XXIX To the South Indian school of architects the temples built by them were the temples , there was no need to designate them as South Indian or Drāvida The 'Brhatsamhitā', too, treats of the temples simply, without calling them Nāgara or any other name which would indicate their 'style'

The 'Visvakarmaprakāśa' and 'Matsyapurāna' too, are without the classification Nāgara, etc , although they treat more fully of the Twenty Temples as they were built in the sixth century and earlier

sūtradhāra' however, the name Vesara does not occur, whereas Nāgara and Drāvida are frequently discussed and the triad of names in completed by the term Vārāta [91]

Another datable source is an inscription from Holal, Bellary District [92] This Western Cālukyan inscription speaks of 4 types of buildings, called Nāgara, Kālinga, Drāvida and Vesara

These three sources belong to the Deccan and the South A South Indian Āgama further clarifies the designations by explicit definitions In chapter XLIX 1-2, the 'Kāmikāgama' assigns the Nāgara temples to the country from the Himālaya to the Vindhya, Vesara from the Vindhya to the river Krsna, and Drāvida from the Krsna to Cape Comorin This ternary is based on that of the Gunas Sattva, Tamas and Rajas [93] Although the ternary of the Gunas constitutes a total—that of the nature of the world,—three further classifications follow, in the 'Kāmikāgama', the ternary of Nāgara, Drāvida and Vesara [94] Sārvadesika, "proper to all countries", Kālinga and Vārāta form the other ternary of styles 2-3) Kalinga is the country now known as Orissa, whereas Varāta has no place in the Sanskrit accounts of ancient Indian geography, and is discussed in the subsequent pages

As the ternary Nāgara, Drāvida and Vesara looms large in contemporary discussions on Indian architecture and has found more than one interpretation it is here being tracked to its sources

NĀGARA —The word Nāgara, as derived from Nagara, a city, means 'pertaining to a city or town' This is a generally accepted meaning, also in Vāstuśāstra "Prāsādas of stone and baked brick should be built for the adornment of towns (nagara) "[95] The shapes of these Prāsādas should be in the likeness of the Five Vimānas, the chariots which Brahmā had created for the gods with the purpose of carrying them on their heavenly ways As the gods are accommodated in heaven, so are they accommodated on earth, and in the latter case their habitations conform with the particulars of living in different towns in the different parts of India As

[91] None of these three names however is given in ch XLIX which deals with the "hall temples" The triple distinction is made in the chapters beginning from LVII only

[92] 'Annual Report of the Assistant Archaeological Superintendent, Southern Circle for Epigraphy', 1915, pp 49, 00 The inscription is in the Mukha-mandapa of the Amrtesvara Temple at Holal, Bellary District, "built long before the Mohammedan conquest of Northern India"

[93] Tamas, the descending tendency, is here given the position of Rajas, the expanding tendency, as Vesara is Tamas, while Drāvida is Rajas

[94] The sequence Nāgara, Vesara, Drāvida belongs to the geographical distribution, whereas the sequence Nāgara, Drāvida, Vesara gives first the two main styles of which is composed the Vesara style It indicates also the chronological position of the style Vesara (see infra)

[95] Kāśyapa, quoted by Utpala, in his commentary to 'Brhat Samhitā', LV 16, similarly enjoins that "temples, conforming with the prescriptions should be built according to the towns (pura)"

Nāgara therefore has also been taken to mean especially "pertaining to Śrī Nagara or Pāṭaliputra, the ancient Metropolis of India", R D Banerji, 'History of Orissa', vol II p 333, which however is not likely for the designation of the temple types as Nāgara, Drāvida, etc is later than the 'Bṛhat Samhitā', when Pāṭaliputra had long ceased to hold the leading position Nāgara may also be derived from Nāga The Vāstupuruṣa "has the shape of a Nāga" ('Viśvakarmaprakāśa', I 97, 99f )—and the Vāstunāga who is Śeṣa or Ananta, encircles every site (p 62)

in heaven, so on earth, are the Vimānas of the gods, they are made of substances which are proper to each, of stone and burnt brick, specially should the temples be built in towns, for those which are known as Vimānas on the ways of the gods (suravartmani) are called Prāsādas when they are immovable (sthāvara, S S LV 104-5)[96]

Another word which means a (fortified) town or city is Pura This word also refers to man ('Nirukta' I 13, II 3) for he too is a residence Thus Brahmapura is the heart as the centre of Being, the residence of Brahman, the Supreme Spirit

On the island of Bali, the word generally used for temple is Pura This meaning, however, is but one of the possible meanings of the word Nāgara

The Twenty Temples of the early Vāstu-sāstras hitherto discussed—bear no particular name comprising them in these texts There are no others, they represent all the possible shapes of the Prāsāda The self same Twenty Temples however are also the subject of one chapter (LXIII) at least of the 'Samarāṅgana-sūtradhāra' It treats of Nāgara-Prāsādas The Twenty Temples in the eleventh century are called "Nāgara" This is how they are distinguished from Drāvida Prāsādas (chapters LXI, LXII) and Vārāta Prāsādas (ch LXIV) Once they were 'The Twenty Temples', now they are known as Nāgara Prāsādas

Another meaning of Nāgara is Universe (Viśva)[97] The temple, the Universe in a likeness, is Nāgara for it rests on the Nāga, the Vāstupurusa, who supports the Universe and is Śesa, the Remainder

Between the fourth and seventh centuries A D, the Hindu temple, it appears, consisting essentially of the perpendicular walls of the Garbhagrha and a superstructure, the Śikhara, was being given shape In the subsequent period local schools worked out in logical sequences, the specific features (laksana) of the Prāsādas One of these schools had its centre in Drāvidadeśa, the country of the Drāvidas, or South India proper from Madras to Seringapatam and Cape Comorin There the temples called Drāvida were built such as are preserved from the seventh century and in the subsequent centuries when the texts referred to were compiled Not only however in the Drāvida country itself but also in the Kanarese part of the Deccan, where Aihole, Mahākūteśvar, Bādāmi and Pattadakal, are situated were such temples built, at an earlier date even This Southern school contributed a particular type of temple to the architecture of India and a particular branch of Vāstuśāstra to its knowledge The South Indian text books on architecture are

[96] In some of the temples this version of their origin is overdone, built of stone, they yet have wheels, carved in stone even this, inappropriate, form has found a great Sthapati to build it in the Sun temple at Konaraka Other wheeled, stone built temples belong to South India, the shrine at Darasuram for example

[97] 'Nanārthārnavasamkṣepa', by Kesava Svāmī, sl 1008-9, TSS p 135, has "nāgaram visva" and also "nāgaram kaseru", Kaseru or Kaserumat is one of the nine divisions of Bharatavarsa or Jambudvīpa, but it is not known which part of India is denoted as Kaseru If it is Madhyadesa, this would agree with a verse of the 'Aparājitaprcchā', Fol 5, (Ms in the S K Ray collection, quoted by S K Sarasvati, l c 'Indian Culture', vol VIII p 183), see note 106

Another meaning of Nāgara is given in the Vācaspatya, s v "Dhanurvedasya sūtram vai yantrasūtram ca Nāgaram", see part I, note 20 In its Vedic affiliation, architecture might have been classified as Nāgara, though the meaning of Nāgara in this application is not given Apte, Dictionary, s v gives "desire of final beatitude" as one of the meanings of Nāgara

copious They treat as a rule, exclusively of the particular South Indian type of the temple in its varieties which they designate by appropriate names

In the 'Bṛhat Samhitā' (LII 1), Varāhamihira spoke of Vāstu-śāstra as transmitted for the pleasure of the astrologers from Brahmā to his days by an unbroken series of sages The 'Īsānasivagurudevapaddhati' however speaks of Brahmā, of the succession of sages, and Maya as having described the Vimānas, such as the twenty Mukhya-prāsādas, etc , which are dealt with in this text (Ī P. III ch XXVIII 3-4) Whereas the whole science of architecture in its primeval connectedness with the stars and the universe is present to Varāhamihira in the sixth century, the later text applies it to a description of the temples only, it adds moreover, the name of Maya to that of Brahmā It begins (śl 7) with the description of 20 main (mukhya) temples, called Nalina, Pralīna, etc The number 20 is the same as that of the more ancient lists, the names however are others and those at the beginning of the list have not the cogency of the names of the Mountain (Meru, Mandara, Kailāsa) which introduce the Twenty Temples of the 'Bṛhatsamhitā' These comprised every shape of the temples then known The later text degrades to the "second class" the names of the Mountain, they introduce the Jātītara Vimānas The special knowledge embodied in the 'Īsānasivagurudevapaddhati' seems to be particularly that which had in Maya its main exponent

Varāhamihira knew that architecture had its beginning in Brahmā In a different context (Br S LV 29-30), he mentioned amongst the sages or preceptors of architecture Visvakarman and also Maya, an apparent controversy between these two great teachers as well as its solution Maya is The Architect, the 'arch-builder' of the 'Īsānasivagurudevapaddhati', tradition knows him to be the master-builder of the Asuras, whereas Viśvakarman is the Architect of the gods Visvakarman reveals the Sthāpatya Veda, he is The Great Architect[98] No regional or ethnical distinctions however have been made in the chapters on architecture of the 'Bṛhatsamhitā', nor are they taken into account by Utpala, the commentator, whereas iconographical distinctions of this kind are referred to at least in one instance, in the text and by the commentator, in the chapter on Pratimālakṣana (Br S LVII 4, 15) Iconometrical differences in the facial proportions of the images are noted and Nagnajit is the authority referred to[99]

The 'succession of sages' in their unbroken continuity is a reality to the earlier text, whereas the later text makes it halt before one Great architect, Maya, who is the mythic builder, of the South Indian branch of the tradition

With the elaboration of architecture in the different parts of the country, each centre became to its own practitioners the central, comprehensive school This

[98] Maya is to the Asuras what Visvakarman is to the gods ('Rāmāyana', IV 51 11) —The 'Mānasāra', I 3-4, derives Vāstu-sāstra from Śiva, Brahmā, Viṣnu, Indra, Bṛhaspati and Nārada , Nārada belongs to the Southern school

[99] He says "That is called Drāvida proportion when the face is 14 angulas long and 12 angulas broad", whereas the general rule is that the face is 12 angulas in length and also in width The greater length of face, according to Nagnajit, is discussed at length in LVII 15, and commentary It distinguishes the facial proportion of 'Drāvida' sculptures, such as can be seen from the earliest preserved South Indian sculptures (second century B C ) through all phases, from those of the rest of India Nagnajit is one of the 18 preceptors whose names are given in the 'Matsyapurāna'

is true of the South Indian or Drāvida branch of the tradition and also of another regional school, which is represented under the name Vārāta in the 'Samarāṅgaṇa-sūtradhāra'

VĀRĀTA Vārāta is derived from Varād (Berar)[100] The 'Rūpamaṇḍana', III 5, a treatise on iconography by Sūtradhāra Maṇḍana, the author of the 'Vāstu-rājavallabha', of the fifteenth century, mentions the Varātas and also the Kirātas, whose country lay on the Vindhyas Vārāta thus is a territorial division and being derived from Varād (Berar) designates Vidarbha (Berar), which extended from the river Kṛṣṇa to about the Narmadā

The 'Kāmikāgama', XLIX 18-20, speaks of the seven storeys, and of the Grīvā, Śikhā and Stūpikā of the pillared—or having pilasters (stambha)—Vārāta temples which are thus shown to be storeyed pyramidal buildings surmounted by a High Temple with its walls (grīvā, 'neck'), cupola and final They represent type I and, on the whole, belong to the same family as the temples "placed on the top of Meru" [101] They are said to be built where Sattva and Rajas are active (ib ), this means where North and South meet The same is also said of another variety of temples called Kāliṅga, their country, is Kaliṅga, where are the temples of Puri and Bhuvaneśvar, etc In this regional style however the Southern elements are subordinated to the general 'Northern' Indian form

These two regional styles are spoken of in the 'Kāmikāgama' after the temples called 'Sārvadeśya' or 'Sārvadeśika' (ib ) which means 'belonging to all countries' No special rules have been laid down for the form and proportions of their buttressed walls whereas Kāliṅga has been given Southern traits

Vārāta and also Kāliṅga thus are known to the 'Kāmikāgama' as regional styles From the South Indian point of view of this Āgama, the third term of this ternary, the 'Sārvadeśika', makes allowance for temples which have the Prāsāda Kṣitibhūṣana for their paradigm (p 251) and which may be built as 'Drāvida, Nāgara or Vārāta' in the opinion of the 'Samarāṅgaṇasūtradhāra'

The 'Kāmikāgama' as well as the 'Samarāṅgaṇasūtradhāra' know of Vārāta as a regional school of architecture The 'Kāmikāgama' describes it concisely It also sums up the main features of the other styles It describes (sl 56) the Nāgara temples as having eight constituent parts (aṣṭavarga) in their elevation These are Mūla, 'the root', *i e* , the foundation or also the terrace, Masūraka, the socle, Jaṅghā, the 'wall', Kapota, the cornice, these form the perpendicular portion of the structure and support the Śikhara, Gala, the circular Āmalasāraka and the Kumbha with its Śūla or final These are indeed the main parts of a temple of 'Type II' Its Śukanāsā is also specially mentioned

S S LXIV shows the Vārāta temples similar in plan to Nāgara temples, it is not divided according to Kūṭa, Koṣṭha, etc Their superstructure however does not seem to have been curvilinear

[100] 'Nāgara, Vesara, Drāvida, etc ' by S Krishnaswami Aiyangar, JISOA, vol II p 25

[101] 'The extant temples in this region however neither conform with the description of Vārāṭa (Vivāṭa) Prāsādas in S S ch LXIV nor with that in the 'Kāmikāgama' The descriptions would more closely fit the temples known as Cālukyan

Outstanding amongst South Indian Vāstuśāstras in recording the schools of architecture outside the Drāvida country, the 'Kāmikāgama' however also establishes the importance of the South Indian school which is its main topic As an exponent of that school it formulates the theory of the Three Styles 'Nāgara, Drāvida and Vesara' seen under the aspect of the Three Gunas and representing the sum total of Indian architecture

VESARA Vesara, in contradistinction to Varāta, is not the name of a country [102] It means "a mule",[103] an issue of heterogeneous parents, in plan (vinyāsa) it is Drāvida, in the shape of its details (kriyā) it is Nāgara ('Kāmikāgama', ib ) It denotes a mixed style

Vesara temples are generally assigned to the country between the Vindhya and Agastya (Nasik)[104] or from the Vindhyas to the river Krsna, as in the 'Kāmikāgama' It thus seems that Vārāta and Vesara denote types of certain temples, assigned to the Deccan But these temples, of 'mixed' type, are preserved to the south of the region allocated to Vesara They were built by the later Cālukyas, in the Kanarese Districts, and by the Hoysala Dynasty, in Mysore They represent a school which consolidated its particular style later than the temples having a curvilinear Śikhara or those of the Drāvida country Certain special features of these temples result from an admixture of Nāgara detail to Drāvida building, this is natural in a region betwixt two powerful schools of which Nāgara, the first and foremost is centered in Madhyadesa, according to the 'Aparājitaprcchā',—in the country bounded by the river Sarasvati in Kuruksetra, Allahabad, the Himālayas and the Vindhya,[105] and Drāvida in South India [106] The earlier Cālukya temples (type I) are Drāvida in plan, the later are Nāgara in plan

The 'Brhacchilpaśāstra', III 68 and 73, gives the following lists of the types or styles of temples beginning with (1) Nāgara, (2) Drāvida, (3) Misraka, (4) Latina, (5) Sādhāra, (6) Bhūmi and (7) Nāgarapuspaka Vimāna, in the first instance, and (1) Nāgara, (2) Drāvida, (3) Virāta,[107] (4) Bhūmi, (5) Latika,

[102] Nevertheless the I P III XXX 41 b, distinguishes the Ksudra alpa-Vimānas according to countries (deśa) as Nāgara, Drāvida and Vesara Vesara here appears to have become substituted for, or identified with, Varāṭa

[103] N V Mallayya, JISOA, IX p 81 f

[104] In the I P, 'Kāmikāgama', also 'Śilparatna', XVI 44, this is not so in verses 47-49, see infra Cf also K R Pisharoti, "Nāgara, Drāviḍa and Vesara', 'Indian Culture', vol VI p 23 f

[105] N L Dey, 'The Geographical Dictionary of Ancient and Mediaeval India', s v

[106] The 'Aparājitaprcchā', Fol 25, assigns Nāgara to the Madhyadesa,—the 'midland' country ('Manu', II 21), Lāṭi to the Lāṭa country (Gujerat—in the main but also as far east as Gwalior—), Drāvidi to the South and Vairāṭi to its own country Re Vairāti, see note 107

[107] Virāṭa or Matsya had Vairāṭa (*Bairat*) *for* its capital, Bairat is situated to the North of Jaipur, Rajputana Although it has nothing to do with Varāta, a later compilation like the 'Bṛhacchilpaśāstra' might have altered the spelling of the label of an architectural style —cf also the 'Naiṣadhacarita', XVI 117 which speaks of Varāṭarāṭ or Virāṭarāṭ according to some commentaries as well as of Vidarbharāṭ S S LXIV treats of 12 Vārātaprāsādas Twice the Āmalasāraka is mentioned as an optional substitute for the Ghaṇṭā (the cupola in its later Cālukyan shape) No such superstructures are in existence —Vārāta, it appears, is the name of a mixed type Its location can not as yet be ascertained 'Vairāṭi to its own country',

(6) Sādhāra and (7) Miśraka, in the second This, though a late compilation, is full of interest Miśraka is third after Nāgara and Drāvida, and so is "Virāta" Misraka, indeed, is Virāta which seems to have been substituted for Varāta

The lists of the varieties of the temples in later Vāstu-śāstras are always headed by Nāgara, once the universal and the leading 'style' Next in importance and consolidated in its own particular form is the type of temples called Drāvida while Vārāta or Vesara, the mixed type of the Southern Deccan, was still near its experimental stage when the 'Samarānganasūtradhāra' was compiled

At all times, however, from the 'Brhat Samhitā' onwards, and probably earlier, Nāgara were the most numerous temples, their centre seems to have been Madhyadeśa From this centre, under the patronage of the respective ruling dynasties, the specific types of temples (p 270A) built there were seen to develop local variations of their own, in the countries to the East (Kalinga) and West (Lāta) In Orissa (Kalinga) as well as in Western India (Lāta), the 'Universal' or Nāgara style was developed in distinct varieties

Having its centre in Madhyadesa, temples were built in the Nāgara style, from the Himālayas in the North, to the East and West coasts of India and as far South as the river Tungabhadra The actual extent of the varieties of the Nāgara temples exceeds, in the Southern direction, the limits given in the Vāstu Śāstras to the style 'Nāgara' The regional schools became known in Vāstu Śāstra under the name of their respective countries of origin [108] While this took place, the Drāvida school seems to have been especially prolific in laying down the characteristics (laksana) of its own type and to prove its importance in the whole of Indian architecture This is shown by its terminology

DRĀVIDA "NĀGARA, VESARA AND DRĀVIDA" The ternary, Nāgara, Drāvida and Vesara, in agreement with the three-fold geographical division of India into the North, the Deccan and the South comprises the entire extent, though not the range of Hindu temples in India [109] The 'Īśanaśivagurudevapaddhati' (III ch XXX 41f), however, makes it clear that in this Śāstra the triple distinction Nāgara, Drāvida and Vesara applies to Ksudra-alpa-Vimānas only, the very small or diminutive shrines, the High Temples (Vimāna, Harmya) on the head of Meru

The temples, in the 'Īśānaśivagurudevapaddhati', III XXX 1-35, classified as Mukhya Vimānas, or the chief and largest of the Jāti Vimānas, the South Indian Vimānas or the "Collective temples", represent each a collection of various classes, namely the storeyed temples, on the head of which is placed a small shrine (the 'Vimāna' described in Part VI) plus a rampart of chapels surrounding each storey

does this mean Virāta? The 'Brhacchilpasāstra', III 73, Comm speaks of Virāta temples in Kalinga and of Latinā temple in Virāta

[108] The diffusion of the various 'styles' went far beyond their original home whence they derived their names in Vāstusāstra (for example, the Kailāsanātha Temple in Elura (Aurangabad), a 'Drāvida' temple, temples in Kurnool, Raichur and the Kanarese Districts, are "Nāgara" The Cālukya and Hoysala temples which seem to correspond to the descriptions of Varāta (-or 'Vesara') temples belong to the South of Berar (Varād)

[109] Certain 'ab original' types such as the wood and stone or brick temples of Malabar are not specially named in the Vāstu-sāstras See howeved Kerala, a 12 storeyed temple, note 112

The Jāti Vimānas are further recognised as Chanda, or Vikalpa or Ābhāsa Vimānas, according to the different arrangement of the several kinds of chapels of which the rampart consists ('Mayamata' XXII 77) [110] The chapels are called Kūta, Kostha, Nīda or Pañjara, etc , according to their different shapes (see Figs on p 185f) They are lesser constituent parts (anukāya anga, I P III XXX 35-41)

The group of temples enumerated after the Mukhya and other kinds of Jātivimānas are the Alpa Vimānas or Ksudra Vimānas, the "Small temples"

The complete South Indian temple is a Jāti Vimāna The Mukhya Vimānas, etc , are but specially large Jāti Vimānas whereas the Alpa Vimānas, also called Ksudra Vimānas, are not complete "collective temples" They consist of the perpendicular "cube" or prism of the walls of the Garbhagiha on whose flat roof is placed another smaller shrine which is domed (Fig e on p 185) The Alpa Vimānas strictly consist of the Vimāna only which is placed "on the head of Meru" [111]

After the discussion of the lesser parts, the Anukāya-angas of a Jāti-Vimāna, the 'Īśānaśivagurudevapaddhati' says of the Ksudra-alpa-Vimāna, the "very small shrine" or the High Temple, which crowns the whole assembly of chapels, that this small shrine is distinguished as Nāgara, Drāvida and Vesara (verses 41-42)

Following the 'Īśānaśivagurudevapaddhati' III ch XXX, 41 f , the "diminutive temple" (Ksudra-alpa Vimāna), the High Temple, of the type Nāgara is square or rectangular, its quality is 'sāttvika', its locality is the country between the Himālayas and Vindhya hills, Drāvida is 'rājasa', the Drāvida country and none else is suitable for the chapel-type Drāvida This is described as six sided or eight sided, of even sides, a regular octagon, etc , or an oblong octagon, or the small temple may also be square below its neck (gala) only, its roof-shape however may have the appearance of a dome in eight sections Vesara is 'tāmasa', it is assigned to the country lying between Agastya (near Nasik) and the Vindhya Vesara should be circular or elliptical (vrttāyata) or 'dvyaśravrtta', which means having one pair of opposite sides straight and the other pair curved, or Vesara may also be square below the neck, i e , the small High Temple has four straight walls and is circular above them, so that a round dome-shape (sikhara) rests on them [112]

The schematism of the division of the whole of India according to the prevalence of the three Gunas and the three styles is not to be taken literally Temples of the

[110] Cf also I P III ch XXVIII 40-41 , XXX 1-18 , 'Kāmikagāma', XLV 19, 20 and LV 123-30

These names also denote different sizes of the South Indian "Collective Temples", Acharya, 'Dictionary', s v

[111] In subsequent centuries, rudiments of the chapels of the parapet, or the images by which these were filled or replaced adorn also the Alpa-Prāsādas

[112] The same shapes of the Śikhara, i e the 'dome' of the High Temple are given in I P IV ch XXXII 65 f There, the proportionate height of the several 'Śikharas' is given They are called each by a name of its own, which has a geographical origin , see note 57 South Indian Vāstu-śāstras give geographical labels to their manifold classifications of the buildings and their parts The 'Mānasāra', XXX 5-6, treats of 10 varieties of 12 storeyed temples they are named after countries such as Pāñcāla, Drāvida, Kālinga, Virāta (cf Varāta), Kerala, Māgadha, etc The 'Kāśyapaśilpa', XXVII 55, on the other hand, classifies a certain kind of one storeyed building as 'Kosala', and types of two storeyed buildings as Pāñcāla and Gāndhāra

Nāgara Type are to be found as far south as Kurnool (Tungabhadra), those of the Drāvida School as far north as Elura

In some of the texts moreover ('Kāśyapa Śilpa', XXV 19-20, 'Śilparatna', XVI 47-49) Drāvida and Vesara have been made to change place The totality of the extent, all over India, of the main shapes of the High Temple is expressed by the ternary Nāgara, Drāvida, Vesara, and it does not matter in this particular classification with what part of India the one name is associated or the other

The implications of this are made explicit by the 'Śilparatna', XVI 51-53 This most carefully compiled text speaks of Nāgara, square from the bottom to the Śikhara, of Drāvida, whose body is square and its dome shape is six sided or Drāvida is eight-sided as in the above descriptions and of Vesara as 'circular' as also described in the 'Īśānaśivagurudevapaddhati' These rules, however, says verse 53 of the 'Śilparatna', XVI, very clearly, are for the Harmya only, and not for the Kūta, Kostha, etc , the latter are the chapels of the rampart or enclosure whereas the Harmya is the diminutive High Temple which crowns the Prāsāda

The South Indian collective temples, the Jātivimānas, Jātītara and also the Mukhya Prāsādas with the storeyed pyramid of their superstructure are classified as Nāgara, Drāvida and Vesara according to the shape of their High Temple, the Harmya or 'Ksudra-alpa Vimāna' [113]

The High Temple (Vimāna, Harmya) which crowns the Prāsāda of Gangaikondacolapuram of the 11th Century (near Kumbhakonam)[114] is circular This Prāsāda would thus be a Vesara Prāsāda of the Drāvida school of architecture, whereas the Koranganātha temple at Śrīnivāsanalur, Trichinopoly District would be a Nāgara temple amongst the Jāti Vimānas of the Drāvida school . The terms 'sadaśra' and 'astāśra', in this connection, seem to denote the number of sections of the 'dome' or Śikhara of the High Temple crowning the superstructure, it is octagonal on the Shore temple at Mamallapuram (Fig on p 185) and on the Brhadīśvara Temple in Tanjore (Fig on p 187) These are Drāvida Prāsādas of the Drāvida or South Indian school

The classification Nāgara, Drāvida, Vesara of the South Indian Vāstuśāstras is an expression of the exuberance of the builders They call their types and patterns after the various schools, and after the main regions of India, giving in this way a universal value to their work Nāgara, therefore heads the list, it is square, for the square is the perfect shape [115]

The ternary furthermore is made to imply not only the wholeness of India, but also the completeness of the three Gunas (Sattva, Rajas, Tamas), and the other ternaries as symbols of totality three world ages, three Principles of manifestation, three great Gods, three castes, etc [116]

[113] Overlooking these unmistakable instructions of Vāstuśāstra, modern scholars have stretched on Procrustean beds their explanations of the terms Nāgara, Drāvida and Vesara, as defined in the South Indian texts, cf K R Pisharoti, l c

[114] P Brown, op cit Pl LVIII, Fig 1

[115] The transfer of names is frequent in Vāstu-śāstra Meru, first amongst the Twenty Temples of the 'Brhat Samhitā' comes to denote the first or leading type of a series of temples As such it is described in the Ī P III XXVIII 10 , XXIX 5, having but three, four or five storeys only and leading the list of the Jātītara, the second series of temples

[116] 'Īśānaśivagurudevapaddhati', III XXX 47

As the Jātivimāna had come to be the collective monument into which were gathered several types of the temple so also is the South Indian village or town the place in which the several varieties of the temples are assembled Nāgara temples in the North, North-West and North-East,—reminiscent of the Northern provenience of this variety, and Drāvida temples in three of the cardinal points expressive of their particular importance Drāvida temples may also be built in the North-West and North-East, where they would alternate with Nāgara temples, leaving the North proper to the Nāgara shrines exclusively

Vesara temples are to be built in the East and the West These two cardinal directions they share with the Drāvida Temples, they should also be built in the South-East and South-West leaving the South proper to the Drāvida temples exclusively as it is the Southern Indian Temple proper Besides these temples, Sārvadesika temples may be built in all the directions ('Kāmikāgama' XLIX 124-127, see chart, p 234) [117]

[117] In verse 132, ib , Vesara temples moreover are assigned to the centre, the four directions and to the South-West Preference seems here given to the circular cupola, whereas in the former passage the polygonal (octagonal, etc ) dome shape of the Drāvida type was the most widely recognised The latter may be built even at both sides of Soma (sl 126)—and also in the eight directions (sl 135) , cf p 233

The earliest South Indian reference to the circular 'Vesara'-grīvā and Śikhara and also to 'Drāvidī' is in the 'Vaikhānasāgama' VI, lines 6-7